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VAN DIE REDAKSIE

VITAMIENE IN DIE SAMESTELLING VAN BLOED

Bloedkunde en voedingsleer is baie afhanklik van mekaar soos bv. blyk uit die probleem wat voedingsanemies oplewer. Heelwat navorsing is al gedoen, met oënskynlik weersprekende resultate in sommige gevalle, oor die rol en die onderlinge verhouding in metabolisme van sulke vitamienfaktore soos foliumsuur en cyanocobalamin (vitamien B_{12}). Die verskil in die resultate van die eksperimente en in die opvattings waartoe hul aanleiding gegee het kan toegeskryf word aan veranderings in oënskynlik nietige voedingsfaktore en aan die verskille in die diere wat gebruik was.

Williams[1] het onlangs die funksies van foliumsuur, cyanocobalamin en askorbiensuur bespreek. Hy beklemtoon die belangrikheid van die ontdekking van foliniese suur en die verband wat dit met foliumsuur besit. Dit is moontlik dat foliniese suur een van die ko-ensieme is wat van foliumsuur verkry word of dat dit 'n tussenproduk is in die vorming van 'n ko-ensiem. Die gebrek aan volledige kennis i.v.m. die samestelling van cyanocobalamin het navorsing i.v.m. die funksie van hierdie vitamien vertraag. Daar bestaan 'n verwantskap tussen askorbiensuur en foliumsuur; dit kan waargeneem word in skeurbuikdiere en ook in *in vitro* studies; dit is vir 'n toename in die omskepping van foliumsuur na foliniese suur verantwoordelik. Benewens ander bekende funksies skyn askorbiensuur ook geassosieer te wees met foliumsuurmetabolisme.

Foliumsuur en cyanocobalamin skyn ook betrokke te wees met die metabolisme van ander stowwe o.a. *thymine* en *thymidine*, *purines*, *glycine*, *methionine*, *tryptophane* en *haem*. Totdat die individuele reaksies op elke stadium bestudeer kan word, kan die fundamentele meganismes, wat by die metabolisme van hierdie vitamiene betrokke is, nie verduidelik word nie. Die chemiese, mikrobiologiese en dierestudies waarop ons huidige kennis van die onderlinge verhoudings van vitamien- en ander voedingsfaktore berus, word deur Williams[1] bespreek. Sommige kliniese eksperimente wat beplan is om hierdie verhoudings te toets en die resultate wat verkry is na 8 jaar van sulke studies, word deur Mueller en Will[2] voorgelê.

Dit is welbekend dat die vitamiene waarvan ons melding gemaak het, doeltreffende middels vir sekere

EDITORIAL

VITAMINS IN BLOOD FORMATION

The two fields of haematology and nutrition depend much on each other, as shown for example in the problem of the nutritional anaemias. There has been much research, some of the results apparently contradictory, on the role and the interrelationship of such vitamin factors as folic acid and cyanocobalamin (vitamin B_{12}) in metabolism. In experimental work changes in apparently unimportant nutritional factors and differences in the animals used and in their management could account for different results and concepts that have been put forward.

The way in which folic acid, cyanocobalamin and ascorbic acid function has been discussed recently by Williams.[1] He points out the significance of the discovery of folinic acid and its relationship to folic acid. It is possible that folinic acid is one coenzyme derived from folic acid, or perhaps an intermediate in the formation of a coenzyme. The lack of complete knowledge about the structure of cyanocobalamin has retarded research into the function of this vitamin. Ascorbic acid has some relationship to folic acid; this has been observed in scorbutic animals, and also in *in vitro* studies showing that it augments the conversion of folic acid to folinic acid. In addition to its other well-known functions ascorbic acid would appear to be associated in the metabolism of folic acid.

Among the substances in whose metabolism folic acid and cyanocobalamin appear to be involved are thymine and thymidine, purines, glycine, methionine, tryptophane, and haem. Until the individual step-by-step reactions can be studied the fundamental mechanisms involved in the metabolism of these vitamins will not be clearly elucidated. The chemical, microbiological and animal studies which have led to the present understanding of the interrelationships of vitamin and other nutritional factors are discussed by Williams.[1] Some clinical experiments devised to test these interrelationships, and the results obtained after 8 years of such study, are presented by Mueller and Will.[2]

anemies is maar, soos hierbo aangedui, is die meganismes wat dit bewerkstellig of hul onderlinge verhouding nie duidelik nie. Mueller en Will[2] bied 'n skema aan die hand i.v.m. die moontlike onderlinge verhoudings van baie van die voedingstowwe wat by erythropoïesis betrokke is; die metabolisme van foliumsuur en die gesuggereerde verwantskap van askorbiensuur blyk uit die abnormaliteite in die reaksie en dit mag die voorval van die megaloblastiese anemies verklaar. Hierdie werkers bied verder 'n uitvoerige skema aan wat 'n uiteensetting gee van die moontlike onderlinge verhoudings van die vitamiene by die kernsuurmetabolisme van pasiënte met megaloblastiese anemie. 'n Fundamentele stelling hier is dat cyanocobalamin en foliumsuur as katalisators ageer in 'n reaksie waarin kernsuur gevorm word, en askorbiensuur op foliumsuurmetabolisme 'n uitwerking het; oënskynlik is cyanocobalamin ook by foliumsuurmetabolisme betrokke. 'n Gebrek aan foliumsuur en cyanocobalamin word geassosieer met tekortkomings in die kernsuurmetabolisme wat tot biochemiese veranderings lei wat in verband gebring word met die hewigheid van die megaloblastiese verandering. Alhoewel foliumsuur aanvanklik die metabolisme van kwaadaardige anemie sal herstel, sal dit later 'n groter tekort aan cyanocobalamin in die hand werk en dit sal lei tot hematologiese en neurologiese manifestasies van die siekte. In kwaadaardige anemie van swangerskap is daar ook 'n defek in die kernproteïenmetabolisme wat te wyte is aan 'n tekort aan die foliniese suur ko-ensiem; die metabolisme-defek is ietwat anders as dié wat gevind word by kwaadaardige Addison-anemie, en foliumsuur word gegee.

Baie navorsing moet nog op biochemiese, hematologiese en kliniese gebied gedoen word ten einde die probleme op te los van die onderlinge verhoudings van foliumsuur, cyanocobalamin (vitamin B_{12}) en askorbiensuur by normale metabolisme (kernsuursintese) en by pasiënte met megaloblastiese anemie. Die navorsing wat nodig is, word aangedui in die aangehaalde publikasies, en diegene wat in hierdie onderwerp belangstel behoort hierdie publikasies te bestudeer.

1. Williams, J. N. (1955): Amer. J. Clin. Nutr., **3**, 20.
2. Mueller, J. F. en Will, J. J. (1955): Amer. J. Clin. Nutr., **3**, 30.

It is well known that the vitamins we have mentioned are effective agents in certain anaemias but, as pointed out above, the mechanisms by which they produce remissions or the manner in which they are interrelated is not clear. Mueller and Will[2] present a scheme of the possible interrelationships of many nutrients involved in erythropoiesis; the metabolism of folic acid and the suggested relationship of ascorbic acid are shown, with the abnormalities in the reaction which may explain the occurrence of the megaloblastic anaemias. These workers go further and present an elaborate scheme in which is shown the possible interrelationships of the vitamins in the nucleic-acid metabolism of patients with megaloblastic anaemia. A basic proposition in all this is that cyanocobalamin and folic acid are catalysts in a reaction in which nucleic acid is formed, and ascorbic acid has an effect on folic-acid metabolism; cyanocobalamin also is apparently concerned in folic acid metabolism. Deficiency of folic acid and cyanocobalamin is associated with defects in the metabolism of nucleoprotein, resulting in biochemical changes that can be related to the severity of megaloblastic change. While folic acid may initially correct the metabolism in pernicious anaemia, there will be later a greater deficiency of cyanocobalamin leading to haematological and neurological manifestations of the disease. In pernicious anaemia of pregnancy there is also a defect in nucleoprotein metabolism, arising from deficiency of folinic acid coenzyme; the metabolic defect is somewhat different from that occurring in Addisonian pernicious anaemia, and folic acid is administered in treatment.

Much work remains to be done in the biochemical, haematological and clinical fields towards solving the problems of the interrelationships of folic acid, cyanocobalamin (vitamin B_{12}) and ascorbic acid in normal metabolism (nucleic acid synthesis) and in patients with megaloblastic anaemia. The research required is indicated in the publications we cite, which should be studied by those interested in this field.

1. Williams, J. N. (1955): Amer. J. Clin. Nutr., **3**, 20.
2. Mueller, J. F. and Will, J. J. (1955): Amer. J. Clin. Nutr., **3**, 30.

IRON PREPARATIONS

The requirements of iron for the normal person are very small. The diet ordinarily provides more iron than is needed, for good supplies of iron are present in certain foods, particularly green vegetables, peas, beans, dried fruits, eggs and liver. Other foods, such as milk, white bread, fish and chicken are relatively poor sources of iron.

The amount of iron absorbed does not appear to depend on the level of haemoglobin but on the reserves of iron in the body. The amount absorbed appears to depend on the presence of an iron acceptor, named apoferritin, in the cells of the intestinal mucosa; the ferritin which is formed gives iron to the plasma whence, transported by plasma globulins (as siderophilin or transferrin), it is transferred to the tissue stores. The amount of iron absorbed is determined by the equilibrium between the iron levels in the tissues, the plasma, and the intestinal mucosal acceptor mechanism.

It has long been known that ferrous salts are better absorbed than ferric salts, and this has been confirmed by the use of radio-active iron salts. Moreover, the utilization of ferrous salts is much greater than that of ferric salts. There also appear to be some differences in the therapeutic value of ferrous salts. Ferrous sul-

phate is very widely used in the form of tablets; in this form it does not run the risk of being oxidized to the ferric state, it is convenient for administration to adults, and the disadvantages regarding taste or blackening of the teeth are avoided. Such tablets, sugar coated and sometimes attractively coloured, have been mistaken by young children for sweets; as a consequence of their ingestion in relatively large amounts severe gastric haemorrhage has occurred and sometimes death.

In a recent investigation on iron-deficiency anaemia in pregnancy Gatenby and Lillie[1] found that many women complained, usually on the grounds of nausea and vomiting, about the ferrous-sulphate tablets given to them. Other preparations were tested and the best results were obtained with ferrous gluconate. The haematological responses, in the absence of intolerance, showed little difference. These authors suggest that every pregnant woman should receive an efficient preparation of iron during the last trimester. Here, and for other iron-deficiency anaemias, ferrous gluconate (e.g. 'ferronicum', 'ferlucon') may prove more satisfactory than ferrous sulphate from the point of view of gastro-intestinal tolerance.

In recent years iron preparations have become available for parenteral administration. This method of therapy is relatively seldom required. It may be used for patients who cannot tolerate or who are refractory to iron preparations given by mouth, in cases with intestinal disease such as ulcerative colitis, and for patients who need iron quickly before an operation; or in late pregnancy when time is short and oral therapy causes gastro-intestinal disturbances; or where transfusions are contra-indicated because of myocardial defect. Saccharated iron oxide ('ferrivenin') may be given intravenously, but care is required because it is alkaline and sometimes causes unpleasant local reactions; also, the dark colour of the solution necessitates special technique with a large syringe and a fine needle to make sure of a truly intravenous injection. Iron-dextran solution is available for intramuscular injection, but here, too, care is required; the injection should be made deeply into the muscle in the gluteal region or the lateral aspect of the thigh with the skin first displaced an inch or two laterally before the needle is inserted. This technique is necessary to prevent leakage and staining of the skin, which may persist for several weeks.

Iron-deficiency anaemia is a common condition and fortunately therapy is effective in most patients receiving ferrous compounds by mouth.

1. Gatenby, P. B. B. and Lillie, E. W. (1955): Lancet, **1**, 740.

REVISION SERIES

XIII. MANAGEMENT OF THE ANAEMIC PATIENT IN GENERAL PRACTICE

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Anaemia is one of the easiest conditions to recognize, yet in spite of this patients are frequently mismanaged. Treatment with iron, liver extract, folic acid or vitamin B12 is often prescribed prematurely without a precise diagnosis being made, not infrequently in the form of proprietary preparations containing combinations of all these substances. When such haphazard treatment is followed by improvement, further investigations are often not undertaken and underlying disease is missed. It is always worth while for the doctor to try and answer the question: Why did this patient become anaemic?

CLINICAL APPROACH

The type of anaemia should first be determined. A full history and physical examination will help to eliminate conditions such as nephritis, chronic sepsis and tuberculosis, in which anaemia may be a secondary feature of the disease. The physical findings, a normal leucocyte count, and the absence of primitive white cells in the blood, will exclude leukaemia, while haemolytic anaemia is unlikely without obvious jaundice. When there is significant anaemia due to haemorrhagic diseases such as haemophilia and the purpuras, the history and clinical features may often point to the diagnosis, but full pathological investigations are necessary in order to separate the various disease entities. Many of the blood dyscrasias need special investigations in a hospital or clinic, but even so the long-term responsibility falls rightly on the general practitioner. On the other hand, types such as the iron-deficiency anaemia, can be handled entirely in domiciliary practice.

In South Africa there is a racial variation in the incidence of blood diseases which is useful in diagnosis. Chronic iron-deficiency anaemia is uncommon in Africans (probably because of their excessive tissue-iron deposits) but it occurs quite frequently among Europeans and Indians. Unlike the children of other races, Indian children are often afflicted with hookworm anaemia. Pernicious anaemia is practically confined to Europeans, whereas megaloblastic anaemia of pregnancy and the puerperium is not uncommon among African and Indian women in Durban, although it is seen only occasionally in Europeans.

In general practice, it is worth while becoming familiar with the microscopic appearance of thin blood-films properly made and adequately stained. (Reference should be made to the descriptions of Dacie[1] or Whitby and Britton[2] for technical details.) Normally red cells appear round in shape with little variation in size and form, and they are well filled with haemoglobin, the centres appearing a little paler than the periphery.

Using a simple method for haemoglobin estimation (such as the Sahli technique), the white-cell count and the microscopic appearance of the blood cells, the larger categories of anaemia can often be sorted out without more detailed investigations of the peripheral blood or the bone marrow.

A. IRON-DEFICIENCY ANAEMIAS

Here the red cells are small (microcytosis), somewhat varied in size (anisocytosis) and shape (poikilocytosis), and show a characteristic rim of cytoplasm round the periphery of the cells, the centres of which are very pale (hypochromia). (See Fig. 1.) These appearances are

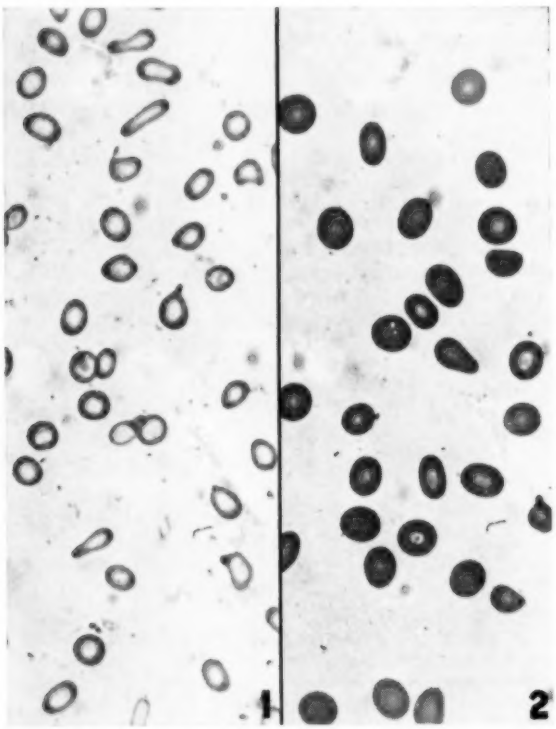

Fig. 1. Blood film: iron deficiency anaemia. The red cells are small and hypochromic, and vary in size and shape.

Fig. 2. Blood film: megaloblastic anaemia. The red cells are large and well filled with haemoglobin, and vary in size and shape. Same magnification for both films.

sufficient evidence on which to diagnose iron-deficiency anaemia. If fuller investigations are available, it will be found that the red-cell count has dropped not nearly as much as the haemoglobin (giving a colour index well below 1·0); the mean corpuscular haemoglobin concentration (MCHC) will be low and the mean corpuscular volume (MCV) decreased.

A useful principle upon which to work is that iron-deficiency anaemia in male patients is almost invariably due to chronic blood loss. In women there is a more delicate balance between dietary intake, absorption of iron, and blood loss, due to the additional factor of menstruation. The iron stores are, therefore, more readily depleted in the female. Gastric hydrochloric acid converts dietary organic iron into the ferrous state, its most absorbable form. Dietary fads, achlorhydria and menstrual loss contribute towards idiopathic iron-deficiency anaemia in women, which is less commonly seen in South Africa than in Britain. Menorrhagia, however, is a frequent cause of iron-deficiency anaemia and a full menstrual history and pelvic examination are essential. Slight continuous bleeding from haemorrhoids, peptic ulceration or carcinoma of the stomach or large bowel often leads to a considerable degree of anaemia and such cases may actually present with the signs and symptoms of anaemia. A diligent search for such a lesion is therefore always necessary—including proctoscopy, radiology of the alimentary tract and sigmoidoscopy. It is not sufficient to ask the patient if he has passed blood in his stools, it is better to test for the presence of occult blood. Stools should also be examined microscopically, since chronic blood-loss from hookworm infestation may lead to severe hypochromic anaemia. On the other hand, anaemia is not usually a feature of infestation with other parasites such as *Entamoeba histolytica* and *Schistosoma mansoni*, nor is it often seen in urinary schistosomiasis.

In addition to iron therapy for the anaemia, treatment of these underlying conditions is obviously of the utmost importance. In women in whom no source of blood loss can be found, idiopathic hypochromic anaemia must be diagnosed and iron treatment continued indefinitely. Ferrous sulphate (3 gr. *t.d.s.*) is usually very effective and well tolerated. Occasionally, larger doses are necessary before there is a response. Ferrous sulphate has the advantage of cheapness over proprietary preparations, but sometimes there are digestive disturbances such as gastritis, colic or diarrhoea, and in these cases another form of oral iron should be prescribed before resorting to the intravenous route. Good results are obtained with iron and ammonium citrate (20 gr. *t.d.s.*), care being taken to advise the use of a straw since this preparation blackens the teeth. It is well to remember that iron salts are toxic. Coated tablets are attractive to children because of their appearance and sweet taste, and fatalities have occurred in infants ingesting 30 gr. of ferrous sulphate. Care should therefore be taken with the tablets in the home.

Intravenous Iron Therapy

There are not many indications for the intravenous injection of iron, but it may be necessary when there is intolerance to iron by mouth and for cases refractory to oral treatment. It is most useful in iron-deficiency anaemia discovered late in pregnancy, especially if there has been vomiting earlier on. In these cases time is limited and it is necessary to achieve as rapid a rise in haemoglobin as possible before delivery.

Administration may present difficulties. Intravenous injection of the dark-coloured solution of saccharated iron oxide requires particular care. It should not be attempted unless the veins are good, for it will cause tissue necrosis if extravasated. Moreover, it may be

followed by thrombo-phlebitis, but given slowly it is well tolerated in doses not exceeding 100 mg. Occasionally it produces tachycardia, flushing, syncope, headache, backache, substernal pain and collapse. It should therefore only be used when there are objections to the oral route.

Saccharated iron oxide (ferrivenin) is dispensed in 5-ml. ampoules each containing 100 mg. of iron. If small initial injections of 25 mg. and 50 mg. give rise to no untoward effects, 100 mg. may be given daily. The total dosage for a course of injections should be calculated on the basis that each 100 mg. of iron will produce a rise of 4% haemoglobin.

Recently a dextran-iron complex has become available for intramuscular injection, but it is too early to assess its place in iron therapy. Preliminary reports are encouraging. However, it is uncommon to find a patient who cannot be adequately treated by oral iron (the cheapest and easiest route) or by intravenous injection.

B. MEGALOBLASTIC ANAEMIAS

As a group these are not seen as frequently as iron-deficiency anaemias. The appearance of the red cells in thin blood-films is quite different, for they are well filled with haemoglobin, many are larger than normal and oval forms are common (Fig.2). Nucleated red cells and nuclear remnants such as Howell-Jolly bodies are sometimes seen. Variation in size and shape is a more striking feature here than in iron-deficiency anaemia, and bizarre poikilocytes are often seen.

These cases should always be more fully investigated. Complete blood counts will reveal high values of the MCV (macrocytosis), with the MCHC within the normal range.

A distinction should always be made between macrocytic anaemias which are megaloblastic and those which are not, for the finding of macrocytic anaemia alone is not sufficient indication for treatment with folic acid, liver extracts or vitamin B12. These are only indicated in the megaloblastic anaemias; in other varieties of macrocytic anaemia, such as aplastic anaemia and the type associated with liver diseases, treatment with these substances has no value. A common error is to start treating a macrocytic anaemia before it has been decided whether it is megaloblastic or not. In megaloblastic anaemias a typical change occurs in the red-cell precursors in the bone marrow. This characteristic appearance disappears shortly after treatment with liver extracts, vitamin B12 or folic acid; so these substances should be withheld until blood investigations are complete. Undue haste in starting therapy, before there is a definite diagnosis, makes subsequent management more difficult. If anaemia is severe the pathologist may find megaloblasts in the peripheral blood, and then examination of the bone marrow is unnecessary; but if they are absent the pathologist should be asked to aspirate a specimen of marrow by sternal puncture.

Gastric analysis is essential if megaloblastic anaemia is diagnosed, but it can be carried out after treatment has commenced. After withdrawing resting juice from the empty stomach, 0·5 mg. of histamine phosphate is injected subcutaneously and specimens of gastric juice obtained 30 minutes and 1 hour later.

When there is histamine-fast achlorhydria, Addisonian pernicious anaemia is present. Such a diagnosis should not lightly be made, for it means treatment for life. Best results are obtained with vitamin B12. Given by intramuscular injection, 100 μg. at weekly intervals will be followed by an excellent response. Once a normal haemoglobin level has been reached, less frequent injections are necessary to maintain good health. Usually 100 μg. of vitamin B12 monthly will suffice. Patients should always be carefully examined for evidence of subacute combined degeneration of the cord, in which peripheral subjective sensations and loss of vibration sense appear early on. When there are neurological complications, weekly injections of 100 μg. of vitamin B12 should be continued after the restoration of a normal blood picture to ensure as much neurological improvement as possible. Folic acid should not be prescribed for pernicious anaemia, for it does not prevent the onset of cord lesions.

A diagnosis of pernicious anaemia is untenable if free acid is present, as it usually is in the megaloblastic anaemia of pregnancy and the puerperium, and in the nutritional type. Megaloblastic anaemia is occasionally seen in malnourished African children, in whom gastric analysis is not necessary since pernicious anaemia is extremely rare in infancy. The treatment of choice in these cases is folic acid, given in oral doses of 5 mg. 3 times a day until the blood picture is normal. In addition, an adequate protein diet should be provided.

TRANSFUSION TREATMENT

Blood transfusion is more urgently indicated in some anaemias than in others, and there are occasions when transfusion is by no means the treatment of choice.

Usually the need for blood transfusion is directly related to the rate at which blood has been lost. Rapid bleeding amounting to 1,500-2,000 ml. may prove fatal, but considerably more can be lost over 24 hours without a fatal outcome. After a severe haemorrhage, haemoglobin estimated from the peripheral blood may leave the doctor with a false sense of security, for it will often be surprisingly high, especially when there has been insufficient time for the restoration of blood volume. Thus immediately after a large haematemesis the haemoglobin may only have dropped to 70%, but as fluid passes from the tissues into the circulation to make up the blood volume the haemoglobin will drop to considerably lower levels. *The decision to transfuse should be made on the clinical state of the patient rather than on the haemoglobin level.* When in doubt in conditions such as haematemesis, where bleeding is difficult to arrest and may be recurrent, it should always be borne in mind that another haemorrhage may be fatal. There should therefore be no delay in transfusion; whole blood has been lost and whole blood ought to be given.

When blood loss is slow there is ample time for compensatory changes in the cardiovascular system, and treatment is not so urgent. In chronic anaemias with faulty blood-formation (such as pernicious anaemia or aplastic anaemia) similar compensatory changes take

place, and patients are sometimes surprisingly active despite haemoglobin levels of 30% or less; if put to bed there is little danger in delaying treatment for a day or two while the type of anaemia is being sorted out.

Once a firm diagnosis has been made, treatment with the appropriate haematinic is usually very effective in severe iron-deficiency and megaloblastic anaemias. Blood transfusion offers no advantages. Within a matter of days these patients will remark upon how much better they feel, and the haemoglobin will be found to increase at the rate of about 1% a day.

Severe chronic anaemias may be associated with the signs and symptoms of congestive cardiac failure. Here blood transfusion is a hazardous procedure. Failure is of the high-output type and unless blood is transfused slowly, and preferably as packed cells in small amounts, there will be a significant rise in the venous filling pressure, and a consequent lowering of the cardiac output and worsening of the degree of failure. Reactions in these patients, too, seem to be particularly dangerous, and transfusion is therefore best avoided if the anaemia is of a type which is known to respond to other treatment.

Case 1. An Indian child aged 9 years was admitted to hospital with severe dyspnoea, marked pallor of the mucous membranes, tachycardia, engorged neck veins, enlarged tender liver, oedema of the ankles and crepitations at the lung bases. The onset had been insidious, without a history of haemorrhage. Examination of the blood revealed a severe iron-deficiency anaemia with 10% haemoglobin. The test for occult blood in the stools was positive and ova of hookworm were detected. Blood transfusion was withheld because of the signs of congestive cardiac failure. The patient responded very well to ferrous sulphate by mouth and later on, when his haemoglobin had risen considerably and the signs of congestive cardiac failure had cleared, a vermifuge was administered. Recovery was complete.

Case 2. A European woman aged 70 years complained of dyspnoea on exertion, tiredness and marked pulsations in the neck. She had been told that she had an aneurysm of the carotid artery. Pallor was striking, her finger nails were spoon-shaped, and there were signs of congestive cardiac failure. Haemoglobin was 25%, the white cells were normal and the blood film showed typical changes of iron-deficiency anaemia. Response to complete rest in bed and ferrous sulphate by mouth was excellent. Investigations for a source of haemorrhage revealed a large diaphragmatic hernia, for which surgery was not advised because of her age. In this condition the mucosa may become constricted and congested, leading to a slow loss of blood. Recovery from anaemia was complete and she remains well on a maintenance dose of iron.

In a personal series of 34 *cases* of severe megaloblastic anaemia of pregnancy and the puerperium in Africans and Indians, haemoglobin values on admission to hospital ranged from 2·1 g.% (14%) to 6·5 g.% (44%), with a mean of 3·7 g.% (25%); 9 were in congestive cardiac failure. Treatment with folic acid gave very satisfactory results and blood transfusion was avoided. In this series 32 patients recovered and 2 died. One of these showed gross pyonephrosis at autopsy, which was considered to be the cause of death; the other was admitted *in extremis*, with 2·5 g.% haemoglobin (17%), congestive cardiac failure, and multiple bilateral retinal haemorrhages and exudates.

THE MANAGEMENT OF OTHER ANAEMIAS

There are of course many anaemias for which there is no specific treatment. In these transfusion is invaluable. Symptoms of anaemia associated with Hodgkin's disease and leukaemia can be alleviated by blood transfusion, which is also often necessary in haemolytic anaemias and after prolonged bleeding in thrombocytopenic purpura. Anaemia which is associated with other diseases and with infection is usually not severe, and will only respond to iron treatment if it becomes hypochromic in type. It usually clears up when the underlying disease has been treated. A good dietary supply of protein is probably more important than extra iron in restoring normal blood counts after sepsis and severe infections.

Substances containing a benzene ring may cause a wide range of blood disorders, affecting the red cells, the leucocytes and the platelets, and there are other substances such as the heavy metals which are known to have similar effects. Toxic causes of agranulocytosis are commonly known, but they are sometimes found in aplastic anaemia, in thrombocytopenic purpura and in acquired haemolytic anaemia. It is therefore wise to enquire closely into the occupation and habits of patients suffering from these diseases, and to find out what drugs are being taken. In aplastic anaemia a close search for possible bone-marrow poisons is particularly important, for withdrawal from exposure offers the only hope of recovery. I have seen a severe case of this disease in a child cured by withholding mesantoin, which was being administered for epilepsy. Usually, however, a toxic cause cannot be detected in aplastic anaemia, and repeated blood transfusion, preferably with packed cells, is the only effective treatment, although it is not curative.

SUMMARY

In the management of the anaemic patient in general practice an attempt should always be made to sort out the type of anaemia and find its cause.

Iron-deficiency anaemias frequently follow chronic blood loss, possible sources of which must be investigated.

Premature treatment of a macrocytic anaemia with vitamin B12, folic acid or liver extract is ill-advised before it has been established whether or not it is of the megaloblastic variety. Vitamin B12 is the treatment of choice in pernicious anaemia, while folic acid is usually more effective in other types of megaloblastic anaemia.

The relative need for blood transfusion in various anaemias is discussed and attention drawn to the possible dangers in severe cases with congestive cardiac failure.

In unexplained anaemias such as acquired haemolytic anaemia, thrombocytopenic purpura and aplastic anaemia, possible toxic causes should always be sought, for their removal may provide the only chance of recovery.

I should like to thank Dr. S. Disler, Medical Superintendent of King Edward VIII Hospital, for permission to publish details of cases; Drs. N. A. Rossiter and J. K. Drummond for access to patients; and Mr. C. R. Stuart for the photomicrographs.

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NON-ROTATION OF GUT

WITH REPORT OF CASE OF LEFT-SIDED APPENDICEAL ABSCESS

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The surgical importance of anomalies of intestinal rotation and the diagnostic difficulties related to their pre-operative recognition has prompted the study of this case.

The term 'non-rotation of gut' is synonymous with 'mesenterium commune' and with 'left-sided colon' a term used by earlier workers.[9] Some American writers [6, 11] group all anomalies of intestinal rotation and mesenteric fixation under the one term of 'malrotation'. We prefer, however, to use Dott's classification.[4] The term 'non-rotation of gut', according to this classification, refers to a complete failure of rotation of the mid-gut segment. This condition is not to be confused with 'situs inversus', where there is usually complete transposition of all the thoracic and abdominal viscera.

It is not the purpose of this paper to discuss in detail the embryology of intestinal rotation. The widely accepted work of Frazer and Robbins,[5] and Dott,[4] gives comprehensive accounts of the factors concerned and the mechanism.

The errors of development are commonest in the mid-gut, which extends from the duodenal biliary papilla to the left third of the transverse colon, and is that portion of the gut which is supplied by the superior mesenteric artery. During the first 4-5 weeks of intra-uterine life the mid-gut herniates through the umbilicus with the cord, carrying with it the superior mesenteric artery. Both the pre-arterial and post-arterial segments of the mid-gut are situated in the sagittal plane at that stage. Three stages are recognized in the rotation and return of the gut. The 1st stage takes place between the 4th and 10th weeks of intra-uterine life, while the loop lies in the umbilical cord. During this stage the pre-arterial segment rotates from the sagittal plane to the right in an anti-clockwise direction through 90° around the axis of the superior mesenteric vessels. As a result, the pre-arterial segment, which later forms mainly the small bowel, lies on the right side, and the post-arterial segment, which will form mainly the large bowel, lies on the left. Failure of the 1st stage of rotation, which is rare, occurs in the condition of exomphalos. The 2nd stage is the stage of return and occurs between the 10th and 11th week. It consists of a reduction of the umbilical hernia with the return of the jejunum, ileum, caecum and colon, in that order, behind the superior mesenteric vessels into the abdominal cavity. This results in a further 180° of anti-clockwise rotation. This stage comes to an end when the whole length of the colon is in its proper place relative to the small bowel; i.e., small bowel on the left side and the caecum on the right side in the sub-hepatic region (Fig. 1a). It will be seen that the mid-gut loop has now rotated on the axis of the superior mesentric vessels through 270° from its original sagittal plane.

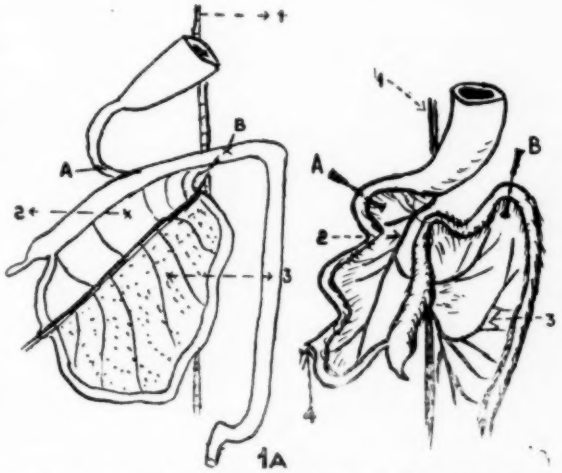

Fig. 1A. Ventral view at end of 2nd stage of rotation. The mid-gut loop has undergone an anti-clockwise rotation of 270°. A-B is mid-gut segment. 1=Aorta. 2=Post-arterial mesentery. 3=Pre-arterial mesentery.

Fig. 1B. Diagram illustrating 'non-rotation' of mid-gut loop. The normal anti-clockwise rotation has been arrested at 90°, and the embryonic position existing at the 8th week is carried forward unchanged into adult life. 1=Aorta. 2=Superior mesenteric artery. 3=Inferior mesenteric artery. 4=Site of the vitelline duct and artery.

The term 'non-rotation' refers to a failure in the 2nd stage. The returning bowel fails to undergo the usual extra 180° of anti-clockwise rotation and thus retains the same primitive relationships as during the 6th week of intra-uterine life, viz. the small bowel on the right side and the colon and caecum on the left side (Fig. 1b). This is the commonest variation met with in radiological practice.[10]

In those cases where the 2nd stage of rotation is incomplete a distribution of the gut intermediate between the normal and non-rotation results. This is known as 'malrotation'.

Other rarer anomalies of rotation which may occur during the second stage are:

(*a*) *Reversed Rotation.* This consists in a clockwise rotation of the mid-gut loop. The post-arterial segment passes behind the artery and thus the transverse colon comes to lie behind the duodenum. The viscera otherwise attain normal positions except for the anterior and posterior relationship, which is reversed.

(*b*) *Paraduodenal Hernia.* According to Andrews,[1] during the 2nd stage of rotation the caecum and colon, as a result of an anomalous 90° clockwise rotation, envelop the small bowel in either the mesentery of the ascending colon (right paraduodenal hernia) or the mesentery of the transverse colon (left paraduodenal hernia).

(*c*) *Undescended Caecum.* This, however, may be congenital or due to adhesions.

The 3rd stage is concerned with the fixation of parts of the mid-gut mesentery to the posterior peritoneum. The normal fixation of the duodenum, caecum and ascending colon to the posterior abdominal wall, and the formation of the extended mesenteric root, takes place then.

The majority of cases of non-rotation are discovered accidentally and give rise to no symptoms. Patients with such anomalies, however, may present with symptoms and signs of intestinal obstruction or strangulation, or may complain of vague gastro-intestinal symptoms usually diagnosed as of a functional nature, while a small proportion may present a picture suggesting coeliac disease.[6] In such cases knowledge of the presence of an intestinal positional anomaly is of considerable importance, because the clinical picture, the diagnosis and the subsequent therapy may be greatly influenced by it. In the 48 cases collected by Dott[4] the erroneous fixation of the bowel was the directly predisposing cause of intestinal obstruction in 27% of the cases. The precipitating factor was either torsion or volvulus. The 2 main conditions which are apt to be overlooked and misdiagnosed in patients with this anomaly are (1) the various types of intestinal obstruction associated with non-rotation, particularly volvulus neonatorum in which there is a clockwise volvulus of the mid-gut from duodenum to transverse colon around the duodeno-colic isthmus; and (2) an abnormally situated appendix becoming diseased or, in other words, a left-sided appendicitis. A case of the latter condition is now presented.

CASE REPORT

H.M.G., a 52-year-old female, was admitted to hospital in 1948 complaining of abdominal pain and vomiting of 3 weeks' duration. Three weeks before admission she started vomiting in the middle of the night and experienced severe cramp-like pain all over the abdomen. This attack continued for 12 hours. She then stopped vomiting but felt a dull pain in her 'left groin' and for the rest of the 3 weeks she had frequent attacks of sharp pain and vomiting. The attacks followed after meals and started with a 'swelling' coming up on the left side of the abdomen. Since the onset the patient had had diarrhoea, but before this illness she had been constipated. Two days before admission a doctor told her that she had a temperature of 102·2°F. There was nothing significant in her past history except that she had had an uncomplicated cholecystectomy 2 years earlier.

At examination immediately on admission her temperature was 100·2°F, the pulse 110 per minute and the respiratory rate 28 per minute. Her tongue was dry and there was guarding and tenderness as well as an indefinite swelling on the left side of the abdomen and particularly in the left iliac fossa. A gynaecological examination was negative. Otherwise no significant abnormalities were found.

She was operated on under general anaesthesia 4 days later, *via* an oblique left lower abdominal incision. The large bowel was found matted and a left-sided pelvic abscess was opened, which delivered a large quantity of foul-smelling pus, found on culture to contain coliform bacilli. No obvious cause could be found for the pus formation. No foreign body was seen or felt and no diverticula were noted. Two drains were inserted and the wound closed. A transverse colostomy was then established through a supra-umbilical mid-line incision. There was no apparent difficulty in finding the segment of the transverse colon and no anomaly of the mesocolic attachment was recorded. The patient was put on penicillin and made good progress. She was discharged 4 weeks later with the colostomy acting well. The final diagnosis entered on the case sheet was diverticulitis with pelvic peritonitis.

Six months later when the patient returned to hospital for closure of the colostomy she developed a left-sided empyema before the operation was undertaken and therefore closure had to be postponed. Recently she again presented herself for closure of the colostomy. She was then referred for X-ray examination of the gastro-intestinal tract and the following were the findings:

'The barium meal passed normally along the oesophagus into the stomach, which was normally placed, presented no unusual features, and emptied at a normal rate. There was deformity at the duodenal cap but no active ulceration was noted. The 1st and 2nd parts of the duodenum took a normal course, the latter passing vertically downwards a little to the right of the mid-line. The direction of the lower flexure was reversed so that the 3rd part of the duodenum and the jejunum was situated in the right hypochondrium (Fig. 2). On following the course of the meal through the gastro-intestinal tract, it was found that the whole of the small intestine, with the exception of the last fragment

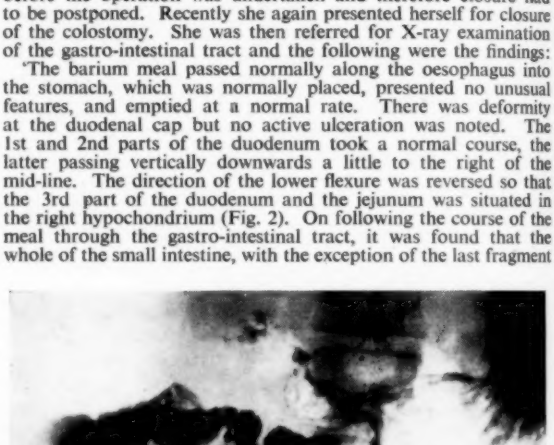

Fig. 2. Case of 'non-rotation'. Supine post. ant. view showing the jejunum situated completely to right of vertebral column and the absence of the normal duodeno-jejunal flexure.

of the terminal ileum, lay on the right side of the abdomen. The rate of passage of the meal through the small bowel was rather rapid. Within an hour it was at the caecum and within 2 hours had reached the colostomy. Films taken 3 hours after the examination showed the terminal ileum entering the caecum from right to left instead of from left to right as is the case in the normal. The caecum and ascending colon were on the left side and the descending colon rose rather high. The appendix was filled and, on screening, both the caecum and appendix were found to be fixed and immobile, but no tenderness was elicited (Fig. 3). Six hours after the administration of the meal, the barium was entirely in the colon. No trace of diverticulosis or diverticulitis was noted, and the portion of the colon distal to the colostomy was perfectly patent and functioned well. A barium enema which passed normally confirmed the absence of diverticula or diverticulitis. No stricture or irregularity of the lumen could be detected and there was no disturbance of the motility or distensibility of the colon. Fluoroscopic examination of the thorax showed the heart and great vessels to be normally situated and the patient showed no radiological evidence of any other abnormality. The conclusions were that the X-ray appearances were those of failure of the 2nd stage of rotation of the mid-gut loop. The absence of any diverticulitis, while the caecum and appendix were fixed and immobile, suggested that the original pathological condition was a left-sided appendiceal abscess'.

It was suggested to the patient that an appendectomy would be advisable but she refused operation. Extra-peritoneal closure of the colostomy was then performed.

DISCUSSION

This case of left-sided appendiceal abscess presented itself as one of diverticulitis with pelvic peritonitis. There was, however, no evidence of diverticulitis either radiologically or at operation. The possibility of perforation of the sigmoid colon by a foreign body such as a fish bone is unlikely when one considers the onset of symptoms, which started with central abdominal colic, indicating obstruction to some part of the bowel lumen. All the characteristic features of non-rotation of the gut were well demonstrated. According to Babaiantz and Kadruka[2] the characteristic radiological features of non-rotation are as follows:

1. Right-sided inversion of the 3rd part of the duodenum.
2. Absence of the duodeno-jejunal flexure.
3. The small intestine is on the right side.
4. Position of the proximal colon on the left side.
5. Absence of the hepatic flexure.
6. The terminal ileum enters the caecum from right to left instead of from left to right.

The value of pre-operative knowledge of the X-ray appearances or, if that is impossible, at least of post-operative roentgen studies is demonstrated by this case. The surgeon and radiologist should be aware of and keep in mind the possibility of a left-sided appendix, and should know the radiological appearances of non-rotation of the gut, for otherwise the condition may be passed over undetected. The diagnosis is almost impossible without X-ray examination. This is not so in situs inversus, where the detection of a dextrocardia and left-sided liver dullness will suggest left-sided appendicitis. The difficulty is further increased by the fact that some appendicitis patients with this anomaly are recorded as complaining of pain in the right iliac fossa although the appendix is on the left side. According to Blegen,[3] in a survey of 57 patients who were operated on for left-sided appendicitis, 21 or 37% had pain in the right iliac fossa. Evidence

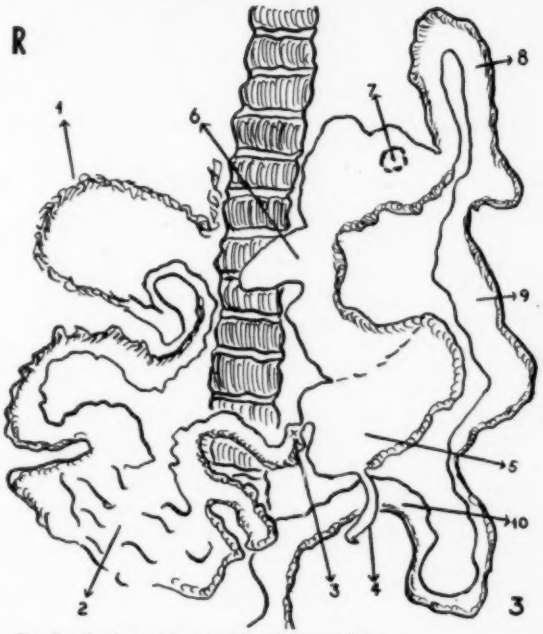

Fig. 3. Supine post. ant. view 3 hours later.

Sketch of Fig. 3. 1. Jejunum. 2. Ileum. 3. Ilio-caecal junction showing terminal ileum entering the caecum from right to left. 4. Left-sided appendix overlying the sigmoid colon. 5. Caecum. 6. Ascending colon. 7. Site of colostomy. 8. Splenic flexure. 9. Descending colon. 10. Sigmoid colon. Note: Small intestine is completely on the right, and large intestine on the left.

suggests that in the left-sided appendix, although the viscera are transposed, the component parts of the nervous system are not reversed.

Those patients in whom non-rotation is discovered accidentally on X-ray should be told of their anomaly and instructed to tell any doctor attending them in the future.

This case also raises the question whether an appendix which was previously diseased and associated with an abscess can fill on subsequent examination. Gramse *et al.*[7] found that, out of 32 patients who underwent appendiceal drainage and returned for interval appendectomy, in 13 (40%) the removed appendix was found to be healthy and normal on histological examination. Hindmasch[8] discussing the pathology of appendicitis states, 'In many cases of appendicitis in which occlusion of the lumen was present, it was noted that the infective process tended to stop at the point of obstruction. Only the distal portion was involved by the diseased process'. It would therefore appear that the proximal portion may remain unaffected by the disease and, after subsequent fibrosis of the perforated end, remain viable and the lumen patent.

SUMMARY

1. The embryology and mechanism of non-rotation of the gut are briefly described.

2. The pathological complications which may arise from this anomaly are mentioned.

3. Left-sided appendicitis and the diagnostic difficulties encountered as a result of this uncommon situation are discussed.

4. A case of left-sided appendiceal abscess diagnosed as ruptured diverticulitis and pelvic peritonitis is reported.

5. The characteristic radiological features of non-rotation of the gut are described.

6. The changes which may take place in an appendix after drainage of appendiceal abscess are referred to. It would appear that a large percentage may resume a healthy viable state.

We wish to acknowledge our thanks to Dr. Josse Kaye, Chief Radiologist, Johannesburg General Hospital, Mr. M. K. Tucker and Dr. Kenneth F. Mills (Superintendent, Johannesburg General Hospital) for their support and permission to publish this case.

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THE FIRST THREE YEARS OF A NEUROSIS CENTRE

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The aim of this paper is to set down what have been the experiences gained in the opening and running of a neurosis ward, to indicate a few of the problems encountered, and to make one or two tentative suggestions as to how a task of this nature may be approached. The unit was opened in July 1951. It consists of a 20-bed ward block within a comparatively large hospital which exists otherwise for the care of chronic sick or elderly patients. Thus it has been necessary to integrate the unit into a hospital not constructed or administered for the treatment of psychological disability. The hospital is laid out in separate blocks, so that the neurosis ward stands on its own; but it is served by the main kitchen, occupational-therapy department, stores, and engineering, secretarial and other services of the hospital. The district is semi-urban in the outskirts of London and we are half-a-mile from the bus terminus and the railway station. There is a shopping centre at 10 minutes' walking distance from the hospital and in another direction there is ready access to open fields.

The 20-bed ward consists of rooms with 1, 2 or 3 beds in each, a kitchen, dining room, sitting room, games room and other amenities; and there is a considerable area of grassed space where patients may sit outside in summer. Out-patient practice is a normal part of our work and roughly one-half of the medical-treatment time is devoted to out-patients, albeit a majority of the latter have at one time or other been in-patients themselves. A small child-guidance clinic is part of the out-patient service, with a play room in the ward; but this venture is separate from the rest of our work and will not receive further consideration in this paper. There are no in-patient facilities for children—nor could they be satisfactorily integrated within an adult ward—but adolescents are occasionally admitted.

Staffing. The staff of the unit comprises one psychiatrist, 2 nursing sisters, 4 staff nurses, and 6 assistant nurses who need not have previous training. In spite of the recent addition of a part-time consultant psychiatrist, the volume of out-patient work is such that the medical staff is hardly adequate. A trained nursing staff of 6 is generous and 5 might suffice, but we have found that there is not scope for more than 3 or 4 untrained nurses. It would be better if junior nurses from a training hospital (general or mental) could come to the neurosis

centre, 3 or 4 at a time for, say, 6 months, as part of their training; but it has not so far been possible to bring such a scheme into operation.

Admission of Patients. Patients are admitted from a wide area, mainly urban. Almost all the cases have been referred for consultation to a psychiatrist, who has advised the admission, the primary consideration being that the patient is suitable for treatment in an open ward and capable of becoming socially integrated into the ward community. The patient may be admitted (*a*) because he is too depressed, schizoid or otherwise upset to be living at home; (*b*) an anxious or disturbed patient may require for a time the rest and security which a hospital ward can best provide; (*c*) in-patient treatment is sometimes the best medium in which to undertake necessary physical therapies such as ECT; (*d*) in some cases we feel that an insecure individual will gain from the social contacts and social therapy of the unit; (*e*) in a few instances the necessity for diagnostic investigation justifies admission; (*f*) sometimes a patient is sent to us because he lives at such a distance from hospital or from a psychiatrist that travelling would be difficult.

Results of Treatment. During the period under review (2½ years) 222 patients were admitted (Tables I and II), of whom no less than 62 had eventually to be classified as having achieved a poor result, while 15 left against advice and 24 were transferred to other hospitals. In some transferred cases preliminary investigation was necessary and in not a few of those who were unimproved we were able to gain a more or less adequate understanding of the patient's personality and illness. Some of those patients have taught the physician valuable lessons in psychology.

The average length of stay in hospital has been progressively reduced, being 75 days in 1951, 68 days in 1952 and 59 days in 1953. During a 4-month period in 1954, 55 patients were admitted with an average length of stay of 38 days. It is one of our aims to eliminate altogether long periods of residence—above 3 or 4 months—in the ward. The cost is perhaps the principal argument against long terms, but, moreover, there is a tendency for a patient whose stay is unduly protracted to become increasingly dependent on the security that the hospital ward and its associations are providing; and if such a patient's neurosis does not materially improve eventual discharge becomes increasingly difficult. Adverse home conditions and travel 'phobia' are two circumstances that have appreciably added to the length of stay in a few instances. In the main, however, it is initial assessment of cases suitable for admission and subsequent clinical judgment that are likely to be the decisive factors.

TREATMENT

Social therapy and the inter-reaction of individuals upon each other, whether patients, nurses or doctors and whether singly or in groups, is a central factor in treatment and is highly valued in its own right. Its benefits, subtle as many of them are, are something that the neurosis centre can give to its patients as a distinct contribution to their recovery. Within a group of patients rather more highly selected than our own, Maxwell Jones (1952) studied the mechanics of social therapy in greater detail and depth than would be possible here. Suffice it to say that a few patients seem to have gained all they required from the social milieu of the unit, but that with the great majority

TABLE I. DIAGNOSTIC CLASSIFICATION

Diagnosis	*Total Patients*	*Left against Advice*	*Recovery*	*Appreciable Improvement*	*Poor Result*	*Transferred*	*Special Circumstances*	*Died*
Schizophrenia and Predominantly Schizoid States	23	3	—	3	9	7	1	—
Anxiety States	76	6	12	33	17	7	1	—
Depressive States	50	4	6	28	6	4	1	1
Hysteria	45	1	2	21	18	2	1	—
Obsessional or Phobic States	14	1	1	6	4	2	—	—
Psychopathic Personality	9	—	—	2	6	1	—	—
Epilepsy	3	—	—	1	1	1	—	—
Organic States	2	—	—	1	1	—	—	—
Total	222	15	21	95	62	24	4	1

TABLE II. SUMMARY OF WORK DONE AND LENGTH OF STAY

	Less than 1 month	1-2 *months*	2-3 *months*	3-4 *months*	4-5 *months*	5-6 *months*	6-13 *months*	*Totals*
Total	65	63	33	27	12	10	12	222
Left against Advice	13	2	—	—	—	—	—	15
Recovery	6	5	3	4	—	3	—	21
Appreciable Improvement	17	28	20	13	5	4	8	95
Poor Result	14	24	3	9	6	3	3	62
Transferred	11	4	6	1	1	—	1	24
Special Circumstances	4	—	—	—	—	—	—	4
Died	—	—	1	—	—	—	—	1

Special circumstances.—Four patients, not in the ordinary way suitable for Neurosis Centre treatment.

some form of individual therapy has been necessary. Our broad outlook on treatment is a psychotherapeutic one and an advantage of the organization at our disposal is that it has been possible in selected cases to give psychotherapeutic interviews several times a week and over substantial periods. In other cases weekly interviews have sufficed but many patients required physical remedies. ECT, minor insulin, sedation and drug therapies all have their place in such a unit as this: where major physical measures, such as deep insulin, have had to be undertaken, it has been necessary to transfer the patient elsewhere. Limited research schemes are possible and experiments have been carried out on the treatment of neurosis by acetylcholine and by methedrine (Maclay, 1953). We have one psychotherapeutic group consisting of women and one of men.

Inter-personal Problems. Difficulties in inter-personal relationships may involve staff or patients or both. In our first 2 years problems of this sort became so serious as to threaten the survival of the unit. Much time was spent in interviews before the psychiatrist could get an adequate understanding of what were the real factors operating, but in the end adjustments were effected that enabled us to sail on an even keel. The following are instances of the sort of difficulty that arose:

Senior nursing staff who worked together in the unit also shared the same small sitting room in the Nurses' Home, and strained relationships became a serious problem. At least 3 nurses were so neurotic as to be unable to cope with these tensions. They displayed overt symptoms and eventually left us to find work in a less stress-producing atmosphere.

A second variety of inter-personal stress involves patients *and* nurses. In a few instances a number of patients have combined in their complaint against a member of the staff for some real or imaginary mistake; the underlying cause may be something quite different, such as jealousy regarding the attention given to particular patients. These occurrences are usually marked by deep and devious undercurrents of feeling within the ward community; and a degree of inner insecurity may exist even among members of the trained nursing staff and may render these valuable assistants unable to bear ward stresses with equanimity.

The Ward Meeting. One way of dealing with this situation is that patients and staff should meet together as a group. It soon became apparent to both patients and staff in such a group that if the matter were pursued far, some of the more aggressive personalities would express recriminations against one or more of the more anxious or depressed, who were ill-equipped to bear such a load at that stage in their treatment and would probably suffer harm. There are limits to the applicability of the ward meeting among a mixed group of neurosis patients such as ours, and the present conclusion is that a group meeting of this sort cannot safely be carried to deeper levels of feeling, though it may serve a useful purpose in permitting the abreaction of specific discontents in a superficial way and promoting some improvement in inter-personal cooperation. It can usefully provide a forum for the discussion of matters affecting ward management etc. Complex reactions are more properly dealt with in the smaller therapeutic group or in individual sessions.

From time to time patients undergoing psychotherapy tell the psychiatrist details of inter-personal differences and hostilities; the writer's policy is freely to permit the recounting of such matters as they arise. In this way it is often possible to achieve release of a part of the patient's tensions and to assist him/her in the handling of his/her own difficulty; and sometimes the psychiatrist can, by direct but usually subtle adjustment elsewhere, ease the tension slightly—at the cost, nevertheless, of an appreciable strain upon himself. The stresses of interpersonal feeling proved to be both wide and deep and called for all the patience he was able to muster. Following are some examples of stresses between individuals:

An out-patient developed a close association with an in-patient, and became involved in a difficult decision whether she should take over the care of the in-patient's child. The in-patient favoured this arrangement but her husband objected and this involved the psychiatrist (who had also been recently consulted by the husband about a personal facet of the matrimonial problem) in the handling of this matter affecting these various people, while he was responsible for the treatment of two of them. This duty could not be evaded: the psychiatrist had to avoid making a decision for anyone, but it was not only a case of helping the various parties to clarify in their own minds the issue involved but also required that the contesting husband and wife should be brought to a point where they could agree to a compromise arrangement. In the end the out-patient did take over the care of the child by mutual consent.

A depressed patient signed an agreement letting her house to the husband of another patient, and when the second patient left hospital the couple moved into the house. The depressed patient would not have made this concession had she been in possession of her proper judgment and when the situation became clear to her there was much recrimination, arguments took place, and a solicitor was consulted; when she was ready to leave hospital there was still no home for her to go to. Here again the psychiatrist and the departmental sister had to play some part in the handling of an issue involving two of their patients.

It was discovered that the keys of the poison cupboard were missing, and suspicion fell on Mrs. A. About the same time Mrs. A accidentally walked into Mrs. B's bedroom, carrying a pillow. This trivial incident registered itself in Mrs. B's mind as unusual and unaccountable and, when she later heard of the loss of the keys, she felt that the facts might be connected; but her loyalty to Mrs. A did not allow her to communicate her suspicions to the sister. Some hours later the keys were mysteriously back in their place and for us that was the end of the matter; but not so with Mrs. B, who was unaccountably unhappy. The psychiatrist found time to give her a special interview that day and an important circumstance emerged: When Mrs. B was a child a fatal accident occurred which she believed had been more or less deliberately caused and that her parents were closely implicated. She knew it was her duty to tell someone about this, yet felt she could not, and as a result she had a sense of guilt. Now, once more, she felt she ought to have revealed the incident of the pillow but could not do so, and this re-activated the guilt felt over the earlier and far more serious matter. Discussion with the psychiatrist of what had thus been brought to light was a useful therapeutic measure.

Occupational Therapy. No department could have cooperated with us more generously than the O.T. unit has done; yet it is in connexion with O.T. more perhaps than anywhere else that we have been aware of the disadvantage of being a mere part of a hospital not otherwise designed for the treatment of neurosis. O.T. is essential in the treatment of neurosis, and the

drawback is that our O.T. department is ill equipped to cater for anything other than the making of soft goods and small articles. Many patients benefit more from O.T. that is of such a nature that they can fee they are actually helping in the work of the hospital or if it bears some relationship to the activity in which they would ordinarily be engaged. To some extent the occupational therapist has been able to provide this by improvization or by giving our patients opportunities of assisting her in organizing functions for more severely crippled patients from other sections of the hospital.

In trying to find other activities for our patients we have met certain obstacles. When we wished a patient to be employed in cutting grass in the grounds it was feared that he might be injured and claim damages. When we wished a patient to paint garden seats some issue was raised concerning trade union principles. Both proposals were eventually agreed to, but this has not always been our experience and many opportunities of work for the patients we have been unable to develop. The administrative authorities of a hospital tend to be apprehensive regarding the innovation of patients performing what might be regarded as normal work, outside the ward routine of cleaning, bed making, etc., but we find that, as instances of such work performed successfully come to light, the official side of the hospital can gradually be won over to our point of view. The function of liaison between the administrative personnel and the medical and nursing staff is a matter of no small importance and will repay time and trouble.

Another problem is that some patients are disinclined to work at O.T. The reasons are sometimes valid, as in the case of the patient with acute phobic symptoms, but sometimes it is due to what even a psychologist would call laziness, and in this matter we feel justified in using considerable persuasive pressure. The sister has established the custom that patients go to O.T. though exceptions may be made on medical grounds and this has been found to eliminate some of the difficulties.

After-treatment. Related to length of stay in hospital is the question of after-treatment. While, naturally, it is our hope to restore a majority of patients to a state of health stabilized sufficiently to enable them to carry on a normal existence without further help from us, there are others who continue to look to the centre as a fount of security. It would seem that this role is a section of the service that we ought to give to the community. We are not here considering those patients who continue to attend for psychotherapy but rather the group who, having left the hospital continue to feel dependence upon it. These patients are wont to come back at intervals in order to meet members of the staff and other patients. On one occasion former patients organized an evening reunion in the ward. The similarity to the idea of the day hospital springs to mind and we have the impression that, as we are able to add occupational and recreational facilities, this idea can be further developed to the advantage of some of our patients. As it is, a small number have become members of an out-patients' club run by a psychiatric social worker in a neighbouring area.

In the transition from hospital life to that of the world outside it is sometimes useful if a patient can start paid work while still having the advantage of residence in the ward, and a small number of patients have been assisted to rehabilitation in this way. In no case so far has it been found necessary to continue the arrangement beyond a few weeks.

The Nursing Staff as Therapists. A patient undergoing psychotherapy told the sister that she was afraid of her interviews with the psychiatrist because of the sexual relationship involved. Obviously this feeling needed to come out but the censorship in the therapeutic session was too strong. A small though definite amount of important material reaches the psychiatrist by this devious route and it is well to make use of this circumstance. In a further selected number of cases, where good rapport between a patient and a sister or staff nurse appeared to be developing, I have encouraged the latter to pursue the psychotherapeutic situation with the patient, thus taking over the actual treatment, allowing for periodic reference by the nurse to the doctor. This has sometimes allowed more therapy to be carried on than the psychiatrist has had time for; it has also widened the opportunities open to the senior staff of finding interest in the work of the ward, of achieving a better understanding of patients and their problems, and of gaining experience. But in a much wider sense than this the nursing staff, both trained and untrained, have constant opportunity to take an active part in social and individual therapy. Nurses are encouraged to play games with patients and associate freely and naturally, and there is something which has grown up in the social atmosphere of the ward kitchen, where little groups congregate at any hour of night or day and which appears to have a community value all its own. The night staff have been willing, where patients' needs seemed to call for it, to talk with them at any time; and this homely feature of hospital life is to be commended. Country dancing is a recent and promising innovation. On occasion, nurses—trained and untrained—have voluntarily given up their time to go out with patients on a shopping expedition or perhaps a visit to a neighbouring town.

Rules. In the early discussions between the psychiatrist and the sister-in-charge it was decided to commence operating the unit with one regulation alone—that patients were to tell sister or nurse if they wished to go outside beyond the immediate precincts of the ward—and to add further rules only if it was found to be necessary. A fire subsequently led to the introduction of a rule about smoking by patients who had received sedatives. It was decided that visitors should be asked to leave the ward by a certain hour in the evening and a fourth rule forbids the driving of a motor vehicle within 48 hours of taking a drug; but we have legislated on very little besides, trusting that patients will respond if we adopt in the hospital much the same attitudes as an innkeeper would in his hotel or we should towards visitors in our own homes. Only once has the writer felt some concern regarding a sexual relationship

between a couple of patients; but in this matter, also, a policy whose only aim was safety would be an unwarranted interference with liberty.

Buildings and Supplies. We have had a number of expressions of pleased surprise that the unit is so agreeable. A patient recently referred to the pleasantness of the building and its surroundings, to the comfortable mattresses, to the freedom patients enjoy and the absence of locked doors, to the liberty the sexes have of mixing with each other at will, and to the good food. It would be a mistake to disregard the advantage that accrues from a modern building standing by itself at a little distance from the other wards of the hospital, surrounded by grass and flowers and with a bright interior divided into public rooms and bedrooms that emphasize the element of personality rather than the barrack-room quality of the large ward.

As soon as our ward was opened for in-patients 3 years ago a difficulty presented itself with regard to the evening meal, which was inadequate for physically healthy patients in a neurosis centre. Friendly contact between our nursing staff and the hospital departments concerned overcame this difficulty immediately.

This experience of little more than 3 years leaves us with still a great deal to learn. In particular we should like to know more of how the inter-reactions between patients and between patients and staff may be used in furthering the treatment of neurosis. And we are still experimenting in the effort to discover the best way, within a small self-contained unit, to resolve those emotional stresses that spread from time to time within the little community and tend to involve everyone, staff and patients together.

I wish to thank Sir G. S. Nightingale, Bt., whose encouragement supported this venture and Dr. R. W. Crocket who has made helpful criticisms of the paper.

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KLEUTERGIMNASTIEK AND UMBILICAL HERNIA

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Though comparatively innocuous, congenital umbilical hernia is nevertheless a very common malady affecting, as it does, approximately one infant out of every five. If treated by infolding it, with the abdominal wall in the middle line, and keeping it in this position by a broad strip of flexible adhesive plaster, it usually recovers completely in a few months. In larger protrusions, and in those cases where 'simpler methods' fail, operative measures are still taken by many surgeons, practically as a matter of course, although some modern surgeons advise that it should be left to spontaneous cure, even without the use of plaster. The extreme rarity with which congenital umbilical hernia is encountered in adult life is proof of the remarkable tendency to self-obliteration shown by this condition.

In view of this spontaneous, if tardy, cure, it is but reasonable and logical to wonder whether, in the final analysis, the conventional 'therapeutic' game is worth the candle. After all, the adhesive-plaster method is a nuisance; it is inherently messy (especially when the baby is bathed), it is irritating to the skin and, if effectively applied, must hamper free abdominal movement and interference with the normal range of respiratory excursions. Where operation is resorted to eventually, it remains a 'surgical insult' even in the best of hands—and an unnecessary insult too, judging by my recent experience.

Striving to assess this striking predilection for self-cure on the part of the congenital type of umbilical hernia, I came to the conclusion that this natural process needed but to be expedited to a moderate degree in order to render obsolete both the elastic adhesive and the surgeon's scalpel. None the less, to accelerate the process, it was necessary, I realized, to determine the factors responsible for its initiation and consummation.

Now, whatever other factors may be operative in bringing about this natural cure, I know of at least one factor, and it is the paramount mechanism underlying the whole process, as I see it. The umbilicus is a scar and, like all scars, it may for a variety of reasons be either weak from the outset, or give way in the course of time. Moreover, a scar being inert as well as inelastic, it can only be strengthened or, rather, reinforced by the aid and agency of contiguous structures endowed with the necessary vitality.

After mature consideration, I concluded that the progressively increasing use, and the resultant increasing strength, of the abdominal musculature in the growing child accounted for the gradual disappearance of the congenital umbilical hernia—and, for that matter, also of infantile umbilical hernia, once the cause of the increased intra-abdominal pressure in the latter (pot-belly of rickets, chronic cough, tuberculous peritonitis, atresia meati, etc.) has been adequately restrained or removed. The continually improving tonus of the abdominal muscles of any growing, normal and healthy child has but to be appreciated to be seen in its proper therapeutic perspective.

The hard facts of gradually 'hardening' infantile muscles were not lost on me, and I set myself the task of finding whether it was possible to expedite this natural process to such an extent that in congenital umbilical hernia adhesive plaster and surgery could be side-tracked. As a result I found that the *Kleuter-*

gimnastiek (Baby Physical Culture) system invented by my wife and myself, in addition to the manifold psycho-physical benefits it bestows on its baby participants, also brings about a rapid cure of congenital umbilical hernia—smoothly, hygienically and painlessly.

To the uninformed it may seem a far cry from the clinical problem of umbilical hernia to the practice and application of *Kleutergimnastiek*. The athletic and acrobatic prowess of our 5 children, from the eldest at university to the youngest a month old, may be regarded by many as 'circus sensationalism', and our *Kleutergimnastiek* judged accordingly. Most practitioners are unaware of its scientific orientation and medical foundation. Some, however, have taken a keen interest in our achievements, and our *Kleutergimnastiek* has had a favourable reception by Physical Education experts both here and in the United States of America. Dr. Danie Craven, of Stellenbosch, has intimated that he considers it an indispensable ramification or subdivision of General Physical Education.

KLEUTERGIMNASTIEK

It is outside the scope of the present article to deal with the various medical aspects of our system, but it is necessary to illustrate its genesis, and how umbilical hernia came into the picture.

The healthy infant takes the keenest delight in the free exercise of his muscles. This fact is the indispensable continuation of the law of nature which sets foetal movements going as early as the 24th week of pregnancy. These movements *in utero* are not the aimless and random wrigglings they are sometimes considered to be. We hold that it is as much a function of the liquor amnii to allow and encourage the foetus to indulge in positive purposive movements as, for instance, to cushion it against a galaxy of jostling stresses and strains. The foetus moves *in utero* in obedience to compulsive instincts, and because the exercise thus obtained is indispensable in stimulating the nervous system, improving the circulation, toning up the locomotor system and promoting a dynamic metabolism. Consequently our aim in starting gently to exercise the neonate as soon as possible after birth, is to continue with the very process so wisely started well before its entry into the world.

Actually, the liquor amnii provides ideal surroundings for the baby to move in freely, and it supplies the correct degree of 'fluid' resistance which the foetal muscles need for the establishment of the optimum tonus required by the exacting 'outside world'. We find, furthermore—and we have proved in many children besides our own five—that in order not to lose the splendid start given them before birth, newborn babies should be very, very gently exercised in a way that closely imitates the so recently forfeited effect of the liquor amnii. Otherwise the little newcomer, for many a month will be like a goldfish just scooped out of its homely, well-loved bowl and left stranded in a quicksand of clothes, sheets, blankets.

Seeing that Nature has so ordained it that the neonate enters the world all purposefully a-swimming, the keystone to our system of *Kleutergimnastiek* is a judicious attempt to imitate Nature. We have discovered that the 'atmosphere' of the liquor amnii is recaptured and re-created to an appreciable extent by bathing the new arrival in a roomy bath, preferably of adult size; that every newborn brings its antenatal swimming proclivities and ability with it; and that, provided only its nose is kept above the water by means of a finger or two under its chin, it can and actually does swim after the fashion of an eel—with slow, writhing and almost athetoid movements of its spine.

This 'swimming' procedure is both simple and rational: After baby has been satisfactorily washed, it is turned onto its belly, and then slowly and gently 'pulled' up and down the length of the bath by the finger-chin method for a period of 3 minutes or so per day. And make no mistake about it; baby just loves it, as is obvious to any unbiased observer. So expert is my wife at this beneficial and profitable 'game' that every one of her dimunitive pupils take to these *pro Deo* 'refresher courses' like the proverbial duck to water, or—better—like a foetus to liquor amnii!

For the first postnatal month or two, neonatal 'swimming' is almost exclusively spinal in origin and execution. Subsequently, however, the chubby little legs begin to whip up the water too, until, round about the 5th month, the arms begin to come into the picture as well and very much in conformity with a seemingly specific pattern. Before the *Kleutergimnastiek* child is a year old it has learned to keep its chin up without any 'outside assistance'—which simply means that it can now swim unaided and regardless of the depth of the water. In other words, by the time the first birthday comes round, every child or pupil of ours can swim (in the fullest sense of this term), merely as a result of our never once—since its 2nd or 3rd day of life—having allowed it the slightest chance to *forget* the lessons learned in the cosy stillness and watery seclusion of its antenatal (and intra-uterine) 'swimming pool'. On the other hand, if those vitally important first 3 weeks of life are 'missed out', for whatever reason, or if subsequently the 3 minutes 'coaching' per day should be neglected (it may be regarded as a dreary chore instead of the glorious task of love which it really is) then the child will *forget* how to swim—and one will have to wait until he is 4 or 5 years old before laboriously beginning to teach him something he should never have been permitted to forget.

These facts are not only interesting and informative; they are significantly valuable. Even so, my wife and I have discovered a great deal more than this. For instance, here is but one further example:

Though every one of baby's three hundred muscles must benefit as much by its postnatal as its antenatal swimming, it is noteworthy that the cervico-spinal muscles especially develop, almost literally by leaps and bounds, as a result of this 'water sport' until, soon enough, a sturdy back has been established. Now it is my experience no less than my contention that a baby's back is the very centre of its muscular universe, that a baby with a strong back is a strong baby all round, and that this type of 'strong' baby is a healthy, contented and happy human being. Moreover, babies

treated or, rather, reared in this 'swimming' manner hold their heads erect, sit unaided, crawl, stand, walk, etc. weeks (and even months) before their 'untreated' contemporaries can master the selfsame achievements. As a matter of fact, all five of our children own could walk steadily before they had even turned 8½ months, and not one of our may pupils ever reached 10 months as a non-walker. We therefore claim that the 'exceptions', 'prodigies' and 'wonder children', so few and far between in the child population of the world as a whole, are the general rule among our *kleutergimnaste*. The very fact that our children have achieved world renown as champion 'balancing babies', is but one of the many 'bites' which yield proof that this delectable 'pudding' is in a class all its own. 'Balancing' of breath-taking standards, after all, is only possible in a subject in whom psycho-physical balance has been built up superbly.

Though postnatal swimming is the foundation of our *Kleutergimnastiek*, we have nevertheless devised numerous subsidiary and synergistic exercises based on movements spontaneously—though at first clumsily and rather ataxically—attempted by the little one, and aimed at increasing not only the locomotor but also the psychosomatic efficiency already initiated by the swimming. And though it is also beyond the scope of this article to describe the objective or the nature of these various supplemental exercises, I must stress the fact of their naturalistic and essentially gentle and simple character—so simple, in fact, that the whole repertoire can be smoothly waltzed through in the 4 or 5 minutes immediately before the bath; so gentle that even the most timorous sceptic can have no reasonable or valid objection to them, especially when confronted by the chuckles of sheer delight with which the baby invariably responds to his 'daily dozen'; and so sensibly natural that any person of normal intelligence and parental love can master them within a very few days at the most.

In the very nature of things, these supplemental exercises may be regarded as being predominantly 'passive' in character—and some have condemned them on this account. But though passive movements in the adult are to be condemned because (*a*) the applied force is too great, and (*b*) they are not under the patient's control, these objections lose their validity in the baby—provided gentleness remains the inviolable watchword of the adult handling the little one. No normal and healthy baby remains passive when being handled or having its limbs moved about; and this is the principle on which all our supplemental exercises for babies are based. Move a baby's limbs, and instinctively, reflexly, involuntarily, it braces itself, resisting and relaxing in turn, thus bringing into play that most potent and invaluable factor, viz. its own volitional impulses. Consequently, its muscles learn to act as fixators, synergists, antagonists and prime movers; and the end-result is that these 'passive' movements have a very substantial element of subjective activity, and the baby benefits accordingly—and enormously.

To recapitulate the combination of assisted postnatal swimming *plus* carefully-graded supplemental exercises constitutes the basic elements of our system of *Kleutergimnastiek* which, in its turn, is merely the common-sense, true-to-nature follow-up of 'foetal gymnastics'. Not only does it promote unsurpassable standards of psycho-physical well-being, but it also endows every normal and healthy child with peerless self-confidence, light-footed gracefulness, poetry of motion and an unfailing sense of rhythm and balance. These wonderful attributes are a goal in themselves—and it is not necessary in the ordinary course of events to go any further. With our own children, however, we have gone much further and have progressed into the realm of sensational child acrobatics, partly because they had an insatiable 'appetite' for ever more exacting gymnastic turns and partly because my wife and I saw in them an opportunity of proving what phenomenal control over body and mind mere children can acquire if the simple dictates of nature are intelligently and conscientiously followed right from birth. These 'circus acrobatics' are, therefore, merely by-products—impressive and commendable though they are—of our basically sound system of *Kleutergimnastiek*.

UMBILICAL HERNIA

Originally my wife and I had never intended our *Kleutergimnastiek* to be anything other than a system for normal and healthy babies. Its possible role in remedial therapy never occurred to us until. . . . .

Until one day a mother brought her newborn baby to us. The little one was saddled with an 'outsize', really nasty, congenital umbilical hernia. But that did not deter its mother; she pleaded with us not to take any notice of it but, instead, to show her how to let baby swim and how to do the supplemental exercises she had heard so much about. It was a hot and sultry summer and I could not but agree with the mother that it would be 'murder' to strap such a tiny abdomen with such a huge bulge. The mother was not the type to shirk her maternal duties; she had already had the child examined by an eminent surgeon, who had undertaken to operate on the child in about 4 months' time.

I found myself on the horns of a dilemma. My wife and I wanted to 'work' only with normal children. *Kleutergimnastiek* was a hobby of ours, applied *pro Deo* to other babies no less than to our own. Give us the normal, and we make it super-normal; give us the the subnormal, and we make it normal; but the abnormal—? No! We had never bargained to have to 'struggle' with even slightly disabled children.

But I never said 'No' to that mother. I visualized how the progressively increasing use of his abdominal musculature by the growing baby led to a continually improving tonus which would account for the striking predilection to self-cure on the part of the congenital type of umbilical hernia, and that our *Kleutergimnastiek* might expedite this tendency to self-obliteration. My wife found the mother a very good pupil and her baby an even better one. In less than 3 months that hernia had disappeared without trace.

Encouraged by this first case my wife and I extended our *Kleutergimnastiek* hobby to more babies with umbilical bulges and in the meantime we worked con-

tinually to improve and extend our system and adapt it to the treatment of umbilical hernia. Though both the postnatal swimming and our usual supplemental exercises strengthened the abdominal musculature as a matter of course, we devised some specific anti-hernial exercises.

Nevertheless the whole procedure never lasted more than 10 minutes per day—approximately 4 minutes' 'supplemental' (including 'anti-hernia') with napkin off, then undressing baby completely, followed by approximately 4 minutes' washing and 'swimming'. The specific anti-hernial exercises were simplicity itself, embodying little more than the following dual technique: (1) Graduated 'bicycling' movements proceeding from small to full range and back to small, and (2) 'Scissors' movements of almost fully extended legs, graduated also in time, power and range, and varying continually from thighs extended to thighs flexed on abdomen, with a little extra tilting of the pelvis in the latter position. The results of these two exercises are so good that we have adopted them as a procedure of routine even in non-hernial cases.

We have fortunately been enabled to put our *Kleutergimnastiek* system to the test of uni-ovular twins which, complete with identical umbilical bulges, were born to close friends of ours. We intended to apply *Kleutergimnastiek* to one only, using the other one as a full control. But, rather understandably, the mother would not cooperate to the full, because she did not want one of her twins to 'forget' how to swim purely for the sake of satisfying our 'experimental whims'. However, she did agree to the one being given nothing but the complete course, and the other doing only the postnatal swimming—but *plus* strapping and *minus* supplemental (including anti-hernial) exercises.

In 7 weeks' time full-scale *Kleutergimnastiek* had completely cured the one hernia, whereas limited *Kleutergimnastiek* (with concomitant strapping) could show only about 40% reduction in the size of the other. We then instituted full-scale therapy in the latter too; and a bare 17 days were sufficient completely to obliterate hernia No. 2 as well.

To date my wife and I have treated 26 neonates for umbilical hernia by *Kleutergimnastiek* (including our own youngest child), and have obtained a cure in every case. Moreover, these 26 already bid fair to emulate the psycho-physical prowess of the many scores of 'normal' babies who have benefited from our system.

40TH SOUTH AFRICAN MEDICAL CONGRESS, PRETORIA, OCTOBER 1955 : 40STE SUID-AFRIKAANSE MEDIESE KONGRES, PRETORIA, OKTOBER 1955

Die negentiende Wetenskaplike Jaarvergadering (40ste S.A. Mediese Kongres) vind plaas te Pretoria vanaf Maandag 17 Oktober tot Saterdag 22 Oktober 1955, in die gebou van die Universiteit Pretoria.

Beskermheer: Sy Eksellensie die Goewerneur-generaal. *President van die kongres*: Dr. J. H. Struthers. *Organiserende Ere-Sekretarisse*: Drr. C. M. Grundlingh en W. Waks. *Mediese Ere-sekretarisse*: Drr. F. Ziady en J. G. du Toit. *Ere-Penningmeester*: Dr. W. A. Lombard. *Kongres-kantoor*: Kamer 28, Administrasiegebou, Algemene Hospitaal, Pretoria.

Wetenskaplike Verrigtinge van die Kongres. Voltallige Sittings: Twee voltallige sittings word gehou, op Dinsdag, 18 Oktober, en Donderdag, 20 Oktober van 8.30 vm. tot 12.30 nm.

ONDERWERP : KANKER

Die onderwerp Kanker is spesiaal gekies omrede die huidige grootskaalse belangstelling daarin van beide die lede van die mediese beroep sowel as die leek. Die Suid-Afrikaanse Nasionale Kankervereniging stel ook diep belang in hierdie aspek van die kongres. Inligting oor die onderwerp kanker kan op die voortreflikste wyse aan die openbare publiek oorgedra word deur die geneeshere se kennis daaromtrent uit te brei. Dit is met hierdie doel voor oë dat die Nasionale Kankervereniging ingewillig het om geldelike bystand te verleen ter bestryding van sommige van die onkoste verbonde aan die kongresreëlings.

Referate wat aan die voltallige sittings gelewer word, moet noodwendig beperk word en geskied slegs by wyse van uitnodigings. Reëlings om ondervermelde vooraanstaande deskundiges uit die buiteland as die hoofsprekers voor te stel, is reeds ver gevorder:

Mnr. H. J. B. Atkins, direkteur van die chirurgiese eenheid, Guys-hospitaal, sal 'n referaat lewer oor ‚The Limits of Surgical Therapy'.

Prof. Alex. Haddow van die Chester Beatty-navorsingsinstituut, Koninklike Kankerhospitaal, Londen, bespreek ‚Carcinogenetic Agents and the practical import arising therefrom'.

Dr. Ralston Paterson, direkteur van die Christie-hospitaal en Holt Radium-instituut, lewer 'n referaat oor ‚The Role of Radiotherapy'.

The 19th Annual Scientific Meeting (40th S.A. Medical Congress) will be held in Pretoria from Monday 17 October to Saturday 22 October 1955, in the Buildings of the University of Pretoria.

Patron: His Excellency the Governor-General. *President of Congress:* Dr. J. H. Struthers. *Hon. Organizing Secretaries*: Drs. C. M. Grundlingh and W. Waks. *Hon. Medical Secretaries:* Drs. F. Ziady and J. G. du Toit. *Hon. Treasurer*: Dr. W. A. Lombard. *Congress Office*: Room 28, Administrative Building, General Hospital, Pretoria.

The Scientific Proceedings of Congress. Plenary Sessions: Two Plenary Sessions will be held, on Tuesday morning 18 October and Thursday morning 20 October, from 8.30 a.m. to 12.30 p.m.

SUBJECT : CANCER

The subject of Cancer has been specifically chosen because of its current popular medical and public appeal. The S.A. National Cancer Association is displaying a keen interest in this aspect of the Congress. Public education on the subject of Cancer is best achieved by increasing the knowledge of medical practitioners on the subject. To this end the National Cancer Association is prepared to shoulder some of the financial burden in connection therewith.

Papers for the Plenary Sessions have, of necessity, been limited and are purely by invitation. Arrangements are well in hand to have the following foremost authorities from Britain as the main speakers:

Mr. H. J. B. Atkins, Director of the Surgical Unit, Guy's Hospital, will speak on 'The Limits of Surgical Therapy'.

Prof. Alex. Haddow, of the Chester Beatty Research Institute, Royal Cancer Hospital, London, will speak on 'Recent Work on Carcinogenetic Agents and the Practical Import arising therefrom'.

Dr. Ralston Paterson, Director of the Christie Hospital and

Dr. Edith Paterson, F.R.C.P. se besprekingsonderwerp is ‚Malignant Diseases in Children', en

Prof. Bryan McFarland van Liverpool se besprekingsonderwerp is ‚Some Aspects of Malignant Diseases in Bone'.

Ander vooraanstaande lede van die mediese beroep wat die kongres sal bywoon, is:

Dr. G. A. Pollock van Edinburgh, wat 'n deskundige op die gebied van serebrale verlamming is.

Dr. Vera B. Walker, 'n deskundige op die gebied van allergie.

Mnr. John Charnley, vooraanstaande ortopediese snykundige van Manchester.

AFDELINGSVERGADERINGS

Onderstaande wetenskaplike afdeling is in die lewe geroep, met ampsdraers as volg:

Verdowingsmiddels: President: Dr. J. Cave, Durban. Onder-president: Dr. O. V. S. Kok, Pretoria. Sekretaris: Dr. J. F. Dippenaar, Pretoria.

Siektes van die Borskas: President: Dr. A. Landau, Kaapstad. Onder-president: Mnr. D. Adler, Johannesburg. Sekretaris: Dr. D. van der Spuy, Pretoria.

Huid- en Geslagsiektes: President: Dr. R. Lang, Kaapstad. Onder-president: Dr. J. Marshall, Johannesburg. Sekretaris: Dr. G. Findlay.

Algemene Praktisyns: President: Dr. A. C. Schulenburg, Potchefstroom. Onder-president: Dr. J. H. Sypkens, Barberton. Sekretaris: Dr. D. A. Fowler, Pretoria.

Kindergeneeskunde: President: Dr. I. Mirvish, Kaapstad. Onder-president: Dr. S. N. Javett, Johannesburg. Sekretaris: Dr. B. Epstein, Pretoria.

Patologie: President: Prof. I. Gordon, Durban. Onder-president: Dr. J. F. Murray, Johannesburg. Sekretaris: Dr. L. S. de Villiers, Pretoria.

Volksgesondheid: President: Dr. G. D. English, Durban. Onder-president: Dr. E. D. Cooper, Kaapstad. Sekretaris: Dr. J. S. de Leeuw, Pretoria.

Senuleer en Psigiatrie: President: Dr. F. H. Kooy, Kaapstad. Onder-president: Dr. K. Lewer Allen, Johannesburg. Sekretaris: Dr. A. McE. Lamont, Pretoria.

Oogheelkunde: President: Dr. A. W. Sichel, Kaapstad. Onder-president: Dr. J. Graham Scott, Johannesburg. Sekretaris: Dr. N. L. Murray, Pretoria.

Ortopedie: President: Mnr. J. M. Edelstein, Johannesburg. Onder-president: Mnr. R. C. Hill, Durban. Sekretaris: Dr. G. Dommisse, Pretoria.

Oor-, Neus- en Keelsiektes: President: Dr. W. A. Kerr, Johannesburg. Onder-president: Dr. L. Lane, Port Elizabeth. Sekretaris: Dr. J. H. Hofmeyr, Pretoria.

Radiologie: President: Dr. E. Samuel, Johannesburg. Onder-president: Dr. J. G. Nel, Germiston. Sekretaris: Dr. F. W. McLachlan, Pretoria.

Fisiese Medisyne: President: Dr. J. A. Levitt, Pretoria. Onder-president: Dr. C. Adler, Johannesburg. Sekretaris: Dr. H. D. Epstein, Pretoria.

Urologie: President: Dr. J. C. Jordaan, Port Elizabeth. Onder-president: Dr. J. A. Currie, Kaapstad. Sekretaris: Dr. P. Maas, Pretoria.

Ginekologie en Verloskunde: President: Prof. L. J. te Groen, Pretoria. Onder-president: Dr. Raymund Theron, Bloemfontein. Sekretaris: Dr. F. G. Geldenhuys, Pretoria.

Hospitaaladministrasie: President: Dr. R. E. Stevenson, Pietermaritzburg. Onder-president: Dr. H. J. Hugo, Pretoria. Sekretaris: Dr. J. G. Burger, Pretoria.

Nywerheidsgesondheid: President: Dr. R. A. Mathews, Johannesburg. Onder-president: Dr. J. B. Lurie, Johannesburg. Sekretaris: Dr. W. J. Oosthuizen, Pretoria.

Medisyne: President: Dr. L. I. Braun, Johannesburg. Onder-president: Dr. F. P. Reid, Johannesburg. Sekretaris: Dr. J. T. M. de Villiers, Pretoria.

Chirurgie: President: Mnr. A. Radford, Durban. Onder-president: Prof. J. K. Bremer, Pretoria. Sekretaris: Dr. A. M. Glen, Pretoria.

Na gelang van die aantal wetenskaplike referate wat ingedien word, sal vergaderings gereël word uitsluitlik as afdelingsvergaderings of as samegestelde vergaderings, en volledige besonderhede hieromtrent sal later verstrek word.

Beeldradio. Ten einde die wetenskaplike verrigtinge des te meer boeiend te maak, word stappe gedoen om, hopelik, sekere operasies wat gedurende die loop van kongresweek in die Algemene Hospitaal verrig sal word, oor die beeldradio te vertoon.

Holt Radium Institute, Manchester, will speak on 'The Role o Radiotherapy'.

Dr. Edith Paterson, F.R.C.P., will speak on 'Malignant Diseases in Children'.

Prof. Bryan McFarland, of Liverpool, will speak on 'Some Aspects of Malignant Diseases in Bone'.

Other eminent members of the profession from overseas attending Congress will be:

Dr. G. A. Pollock of Edinburgh who is a leading expert on Cerebral Palsy.

Dr. Vera B. Walker who is an expert on Allergies.

Mr. John Charnley, a leading Orthopaedic Surgeon from Manchester.

SECTIONAL MEETINGS

The following scientific sections have been formed with office-bearers as follows:

Anaesthetics: Pres.: Dr. J. Cave, Durban. Vice-Pres.: Dr. O. V. S. Kok, Pretoria. Secy.: Dr. J. F. Dippenaar, Pretoria.

Chest Diseases: Pres.: Dr. A. Landau, Cape Town. Vice-Pres.: Mr. D. Adler, Johannesburg. Secy.: Dr. D. van der Spuy, Pretoria.

Dermatology: Pres.: Dr. R. Lang, Cape Town. Vice-Pres.: Dr. J. Marshall, Johannesburg. Secy : Dr. G. Findlay, Pretoria.

General Practitioners: Pres.: Dr. A. C. Schulenburg, Potchefstroom. Vice-Pres.: Dr. J. H. Sypkens, Barberton. Secy.: Dr. D. A. Fowler, Pretoria.

Paediatrics: Pres.: Dr. I. Mirvish, Cape Town. Vice-Pres.: Dr. S. N. Javett, Johannesburg. Secy.: Dr. B. Epstein, Pretoria.

Pathology: Pres.: Prof. I. Gordon, Durban. Vice-Pres.: Dr. J. F. Murray, Johannesburg. Secy.: Dr. L. S. de Villiers, Pretoria.

Public Health: Pres.: Dr. G. D. English, Durban. Vice-Pres.: Dr. E. D. Cooper, Cape Town. Secy.: Dr. J. S. de Leeuw, Pretoria.

Neurology and Psychiatry: Pres.: Dr. F. H. Kooy, Cape Town. Vice-Pres.: Dr. K. Lewer Allen, Johannesburg. Secy.: Dr. A. McE. Lamont, Pretoria.

Ophthalmology: Pres.: Dr. A. W. Sichel, Cape Town. Vice-Pres.: Dr. J. Graham Scott, Johannesburg. Secy.: Dr. N. L. Murray, Pretoria.

Orthopaedics: Pres.: Mr. J. M. Edelstein, Johannesburg. Vice-Pres.: Mr. R. C. J. Hill, Durban. Secy.: Dr. G. Dommisse, Pretoria.

Otorhinolaryngology: Pres.: Dr. W. A. Kerr, Johannesburg. Vice-Pres.: Dr. L. Lane, Port Elizabeth. Secy.: Dr. J. H. Hofmeyr, Pretoria.

Radiology: Pres.: Dr. E. Samuel, Johannesburg. Vice-Pres.: Dr. J. G. Nel, Germiston. Secy.: Dr. F. W. McLachlan, Pretoria.

Physical Medicine: Pres.: Dr. J. A. Levitt, Pretoria. Vice-Pres.: Dr. C. Adler, Johannesburg. Secy.: Dr. H. D. Epstein, Pretoria.

Urology: Pres.: Dr. J. C. Jordaan, Port Elizabeth. Vice-Pres.: Dr. J. A. Currie, Cape Town. Secy.: Dr. P. Maas, Pretoria.

Gynaecology and Obstetrics: Pres.: Prof. L. J. te Groen, Pretoria. Vice-Pres.: Dr. Raymund Theron, Bloemfontein. Secy.: Dr. F. G. Geldenhuys, Pretoria.

Hospital Administration: Pres.: Dr. R. E. Stevenson, Pietermaritzburg. Vice-Pres.: Dr. H. J. Hugo, Pretoria. Secy.: Dr. J. G. Burger, Pretoria.

Industrial Health: Pres.: Dr. R. A. Mathews, Johannesburg. Vice-Pres.: Dr. J. B. Lurie, Johannesburg. Secy.: Dr. W. J. Oosthuizen, Pretoria.

Medicine: Pres.: Dr. L. I. Braun, Johannesburg. Vice-Pres.: Dr. F. P. Reid, Johannesburg. Secy.: Dr. J. T. M. de Villiers, Pretoria.

Regulasies betreffende die bestuur van 'n S.A. Mediese Kongres. Die aandag word in besonder bepaal by regulasie V (2), aangaande afdelingsvergaderings, wat as volg lui: ‚Referate vir afdelingsvergaderings moet hoogstens 20 minute leestyd in beslag neem (in die geheel of verkort), en bespreking en repliek word tot sewe minute per spreker beperk. 'n Getikte opsomming van elke referaat, wat 500 woorde nie te bowe gaan nie, moet minstens 60 (sestig) dae voor die Kongres by die Ere-sekretaris van die betrokke afdeling ingedien word. Die volledige getikte referaat moet 30 (dertig) dae voor die aanvang van die Kongres in duplo ingedien word.'

Lede wat graag referate wil voorlees, word versoek om met die ere-sekretaris van die betrokke afdeling so spoedig doenlik in verbinding te tree. Die sluitingsdatum vir die ontvangs van referate is 31 Julie 1955.

Met die oog op die beperkte tyd wat vir die hou van afdelingsvergaderings gedurende die Kongres beskikbaar is, sal die Gesamentlike Mediese Sekretarisse verantwoordelik wees vir die keuse van referate vir voorlesing waar daar 'n buitengewone aantal voorgestel word.

Druk van referate. Die komitee is voornemens om opsommings van referate wat by geleentheid van die Kongres voorgelees word in die Brosjure vir die Kongres op te neem en, waar moontlik, hulle in die vorm van strookproewe *in extenso* voor elke vergadering beskikbaar te stel. Alle opsommings van referate moet die Mediese Ere-sekretarisse voor op op 31 Julie 1955 bereik. Na hierdie datum word geen verdere referate vir publikasie aangeneem nie.

Registrasie. Registrasie van plaaslike lede en ander lede wat van voorneme is om vroegtydig in Pretoria aan te kom, sal op Sondagmiddag, 16 Oktober 1955 plaasvind en verdere registrasie geskied op Maandagmôre, 17 Oktober.

Registrasiegelde. Gewone lede van die Mediese Vereniging van S.A., £2 2s. Emeritus-lede van die Mediese Vereniging van S.A., gratis. Ere-lede van die Mediese Vereniging van S.A., gratis. Ge-affilieerde lede van die Mediese Vereniging van S.A., £2 2s. Interne, 10s.

Amptelike Funksies. Akademiese drag. Dit is gebruiklik om in akademiese drag gekleed te wees vir sekere amptelike plegtighede van die Kongres. Die firma Dippenaar en Reynecke, van Pretoriusstraat, Pretoria, het te kenne gegee dat hulle beskik oor 'n beperkte aantal akademiese togas en mantels wat vir hierdie plegtighede gehuur kan word, mits hulle betyds verwittig word van die afsonderlike vereistes van lede. Diegene wat reëlings wil tref omtrent die huur van vermelde akademiese togas ens., word versoek om regstreeks met die firma Dippenaar en Reynecke in aanraking te tree.

Kerkdiens. Reëlings word getref vir die hou van 'n inter-kerklike kerkdiens om 7.30 nm. op Sondag, 16 Oktober 1955. Hierdie kerkdiens vind plaas onmiddellik voor die Openbare Lesing, wat om 8.30 nm. op dieselfde aand 'n aanvang neem. Mnr. Hedley Atkins van Guys-hospitaal lewer die hooftoespraak oor sekere aspekte van kanker, onder die opskrif ‚Fears can be Liars'.

Kongresbanket en -bal. Kaartjies vir bovermelde gesellige byeenkomste, waar die dames graag verwelkom word, is beskikbaar teen die volgende pryse: Banket, £2 10s. (per dubbelkaartjie), £1 10s. (per enkelkaartjie). Bal, £2 10s. (per dubbelkaartjie), £1 5s. (per enkelkaartjie). Betaalbaar wanneer registrasie geskied. Voorafgaande betaling vir hierdie funksies by geleentheid van registrasie is noodsaaklik ten einde beraming vir verversingsdoeleindes te vergemaklik.

Hotelbesprekings. Die Toeristeburo van die Suid-Afrikaanse Spoorweë behartig alle plekbesprekings. Dit is hoogsbelangrik dat hotelbesprekings vroegtydig gereël word—Pretoria se Eeufeesviering neem 'n aanvang gedurende dieselfde week en daar word verwag dat die stad oorstroom sal wees met besoekers uit alle oorde. Indien daar geen tak van die Toeristeburo in u omgewing bestaan nie, geliewe met u plaaslike stasiemeester in aanraking te tree en die nodige reëlings sal deur laasgenoemde waargeneem word.

Pretoriase Eeufees. Pretoria vier vanjaar sy honderdjarige bestaan. Die amptelike opening van die verrigtinge vind ongeveer om 5.30 nm. op Vrydag, 21 Oktober 1955, plaas. Verskeie vermaaklikhede van 'n buitengewone aantreklike aard word gedurende die feesviering in die stad aangebied, en na verwag word sal Pretoria ongetwyfeld *en fête* wees.

Handelsuitstalling. 'n Handelsuitstalling word weer gereël om gedurende die loop van die Kongres in die Universiteitsgebou

Surgery: Pres.: Mr. A. Radford, Durban. Vice-Pres.: Prof. J. K. Bremer, Pretoria. Secy.: Dr. A. M. Glen, Pretoria.

Depending largely on the number of scientific papers submitted, Meetings will be arranged as purely sectional or combined meetings and full details of the programme will be issued later.

Television. As an additional attraction to the scientific proceedings, it is hoped to televise certain operations being done at the Hospital during Congress Week.

Regulations Governing the Holding of a S.A. Medical Congress. Attention is especially directed to Rule V (2) concerning Sectional Meetings as follows:

'Papers for Sectional Meetings shall not occupy more than 20 minutes in reading (in whole or in summary), and discussion and reply shall be limited to 7 minutes for each speaker. A typed synopsis of each paper, not exceeding 500 words, shall be submitted to the Honorary Secretary of the Section sixty (60) days before the Congress. The full paper shall be submitted, typed and in duplicate, thirty (30) days before the Congress.'

Members wishing to read papers at Congress are requested to communicate with the Hon. Secretary of the Section concerned as soon as possible. The closing date for receipt of papers to be read is 31 July 1955.

In view of the limited time available for Sectional Meetings at Congress, the selection of papers, in the event of an excessive number being submitted, will be at the discretion of the Joint Medical Secretaries.

Printing of Papers. It is the intention to publish summaries of papers read at Congress in the Congress Brochure and, if possible, as galley-proof prints *in extenso*, for issue before each meeting. All summaries of papers for Congress must reach the Honorary Medical Secretaries on or before 31 July 1955. After this date no further papers will be accepted for publication.

Registration for Congress. Registration for local members and early arrivals will be arranged to take place on Sunday afternoon 16 October 1955, and the remainder on Monday morning 17 October.

Registration Fees. Ordinary Members of the M.A.S.A., £2 2s Emeritus Members of the M.A.S.A., no fees. Honorary Members of the M.A.S.A., no fees. Affiliated Members of the M.A.S.A., £2 2s. Interns, 10s.

Official Functions of Congress. Academic Dress: It is customary to wear academic dress at certain official functions of Congress. Messrs. Dippenaar & Reinecke, of Pretorius Street, Pretoria, have agreed to arrange for the supply in limited numbers of graduate gowns and hoods, provided they are advised in good time as to the individual requirements of members who intend hiring academic dress.

Congress Church Service. Arrangements have been made for a non-denominational church service to be held on Sunday 16 October 1955, at 7.30 p.m. This service precedes the Popular Lecture, which will commence at 8.30 p.m. on the same evening. This address, given by Mr. Hedley Atkins of Guy's Hospital, will be devoted to certain aspects of cancer, the title being 'Fears can be Liars'.

Congress Banquet and Ball. The charge for attending these functions, which will be mixed gatherings, will be: Banquet, £2 10s. (double ticket), £1 10s. (single ticket). Ball, £2 10s. (double ticket), £1 5s. (single ticket). Payable on registration. Payment in advance for these functions at registration is extremely important in order to facilitate calculations for catering purposes.

Hotel Accommodation. Accommodation is being handled entirely by the S.A.R. & H. Tourist Bureau. It is of the greatest importance that accommodation be arranged at an early date in view of the fact that a tremendous influx of people is expected into Pretoria, where the Centenary Celebrations commence during the same week as Congress. If there is no branch of the S.A.R. & H. Tourist Bureau in your area, the local stationmaster will be able to make all necessary arrangements.

Pretoria Centenary Celebrations. This is Centenary Year in Pretoria. The official opening of the celebrations will take place

plaas te vind. Na verwag word sal hierdie uitstalling van 'n buitengewone hoë standaard wees en behoort grootliks by te dra tot die sukses van die Kongres.

Wetenskaplike Uitstalling en Dokters se Stokperdjies. Die wetenskaplike uitstalling staan onder beheer van prof. Davel en dr. Neil Murray is die saamroeper van die afdeling vir Dokters se Stokperdjies. Dit is hoogsnoodsaaklik dat voornemende uitstallers in beide hierdie afdelings met die betrokke saamroeper sonder versuim in aanraking moet tree en 'n kort omskrywing van die aard van hul uitstallings, asook van die ruimtevereistes, moet verstrek.

Program van Geselligheide, Klubfasiliteite, Sport, ens. 'n Volledige program van gesellige bedrywighede, en dies meer, sal in die finale omsendbrief vervat en heelmoontlik gedurende die eindweek van Septembermaand uitgestuur word. Rolbal-, gholf-, en tenniskompetisies vind op Donderdagmiddag, 20 Oktober, plaas en lede wat graag hieraan wil deelneem word versoek om met die organiserende ere-sekretarisse in aanraking te tree.

Alumnus- en kollege-dinees. Dinsdagaand, die 18de Oktober, is beskikbaar vir die reëling van alumnus- en kollege-dinees. Sodanige reëlings behoort onafhanklik van die Organiserende Kongreskomitee gemaak te word.

Kennisgewing aan Rotariërs. Die Pretoriase Rotariërklub hou sy gewone vergadering op Donderdag, 20 Oktober 1955 in die Hotel Assembly en Kongreslede wat ook Rotariërs is en hierdie vergadering graag wil bywoon, moet hulle name by Dr. W. Waks inhandig.

Besoek aan die Wildtuin. Die Kruger-wildtuin word spesiaal oopgemaak gedurende die naweek 22 tot en met 24 Oktober 1955, ten einde kongresbywoners in staat te stel om die wildtuin te besoek. Die Sekretaris van die Raad vir Nasionale Parke sal die geselskap persoonlik vergesel, en die totale onkoste per persoon sonder inbegrip van vervoer, sal omstreeks £2 10s. wees. Enigeen wat graag hierdie uitstappie wil geniet, moet ons asseblief so gou moontlik laat weet.

Aantekening vir die dames. Gewoonlik kan 'n mens daarop staatmaak dat die weer gedurende Oktobermaand in Pretoria heerlik is. Benewens die Banket en die Bal, sal u op verskeie ander gesellige byeenkomste onthaal word, onder meer 'n skemerontvangs te Goewerneurswoning deur Sy Eksellensie die Goewerneur-generaal, 'n braaivleis in die Fonteine-dal wat deur Sy Edelagbare die Burgemeester gereël word, 'n modeparade, 'n tee-party, en sportbyeenkomste met inbegrip van gholf, tennis en rolbal.

Voorneme-kaarte. Alhoewel die aantal antwoorde op Voorneme-kaarte wat tot dusver ontvang is, heeltemal bevredigend is, wil ons graag daarop wys dat daar maar 'n geringe aantal hotelbesprekings gemaak is, en die Komitee is daarvan oortuig dat talle besoekers wat van voorneme is om die Kongres by te woon, nog geen reëlings in verband met hul akkommodasie getref het nie. Hulle word aangeraai om dit sonder versuim te doen. Graag lê ons weer nadruk op die noodsaaklikheid daarvan om Voorneme-kaarte so spoedig moontlik aan die Kongreskantoor terug te stuur ten einde die werk van die Organiserende Komitee te vergemaklik en hulle in staat te stel om die doeltreffendste reëlings te tref vir die ontvangs en onthaal van Kongresgangers.

C. M. Grundlingh en W. Waks
Organiserende Ere-Sekretarisse

Kamer 28
Administrasiegebou
Algemene Hospitaal
Pretoria

at about 5.30 p.m. on Friday, 21 October 1955. There will be numerous unusual attractions in Pretoria on this occasion and there is no doubt that the city will be *en fête*.

Trades Exhibition. A Trades Exhibition will again be held at the University throughout Congress week. This is anticipated to be of a very high standard and an invaluable contribution to the success of the Congress.

Scientific Exhibition and Doctors' Hobbies. The Scientific Exhibition is in the charge of Prof. Davel and Dr. Neil Murray is the convener of the section for doctors' hobbies. It is most important that exhibitors in either section should contact these conveners without delay, indicating at the same time in a brief write-up the nature of their exhibits and space requirements.

Programme of Entertainments, Club Facilities, Sport, etc. A full programme will be issued in the Final Circular which will probably be ready for despatch during the last week in September. Bowls, golf and tennis competitions will take place on the afternoon of Thursday, 20 October 1955, and members wishing to participate in any of these events are asked to get in touch with the Organizing Secretaries.

Alumni and College Dinners. Tuesday night, 18 October, is available for arranging alumni and college dinners. Arrangements for these dinners should be made independently of the Congress Organizing Committee.

Notice to Rotarians. The Pretoria Rotary Club will hold its usual meeting on Thursday, 20 October 1955, at the Hotel Assembly and Rotarians attending Congress who wish to visit the Reserve. The Secretary of the National Parks Board will be accompanying the party and the over-all cost per person, excluding travelling expenses, will be £2 10s. Anyone wishing to go on this trip should let us know as soon as possible.

A Note for the Lady Visitors. October is usually a particularly delightful month in Pretoria. Besides the mixed banquet and the Ball, you will be entertained to a late afternoon reception at Government House, a mannequin parade, a morning tea given by the wife of the President of Congress, a braaivleis given at Fountains by the Mayor of Pretoria, as well as such sporting activities as golf, tennis and bowls.

Intention Cards. Although the initial response to the Intention Cards has been fairly satisfactory, the number of people who have booked hotel accommodation is very small and the Committee is satisfied that many people who have indicated their intention to attend Congress, have not as yet made any arrangements for accommodation. They are advised to do this without delay. We would like to stress once more the necessity for receiving your Intention Cards so as to facilitate the work of the Organizing Committee and to enable the best arrangements to be made for the reception and entertainment of members of Congress.

C. M. Grundlingh and W. Waks
Hon. Organizing Secretaries

Room 28
Administrative Building
General Hospital
Pretoria

MEDICAL MATTERS IN PARLIAMENT

BY A PARLIAMENTARY CORRESPONDENT

POLIO VACCINE

A statement would be broadcast to the country as soon as investigations now being conducted into the Union's stocks of anti-poliomyelitis vaccine were concluded, the Minister of Health, Mr. J. F. Naudé, said in the House of Assembly in the closing minutes of the 1955 session of Parliament. He had given an undertaking to make a statement about the vaccine before the House rose.

He said that the Secretary for Health (Dr. J. J. du Pré le Roux) had recently returned from the United States of America, where he attended conferences on the subject and had discussions with health authorities. He reported that intensive investigations were made during recent weeks into the unfortunate incidents that occurred in that country following on the use of certain anti-poliomyelitis vaccine. This had resulted in the promulgation of revised safety standards for such vaccine.

The Secretary had arranged for the Department of Health to be kept fully informed about all developments in the United States. The preliminary reports on the cases that contracted the disease after vaccination had just come to hand.

'This information', the Minister continued, 'together with the results of the application of the revised safety standards, against which the stocks of the vaccine available in the Union are now being tested, will be considered by the committee of virologists and public health administrators in the near future. If their report is favourable it will be possible to release the stocks of vaccine held in the Union and to proceed with vaccination without further delay'.

REGISTRATION OF MEDICAL AUXILIARIES

The report of the Select Committee on the Supplementary Health Services Bill has been published. In it the Committee states that it was not able to complete its work before the prorogation and as it considers that the legislation should be put on the Statute Book as soon as possible it proposes that the members of the Committee should be appointed as a committee of inquiry to continue the work during the parliamentary recess. The report was not debated before Parliament was prorogued.

The Select Committee held 13 meetings during the session, its work being in effect a continuation of that carried out by a similar select committee in 1952. It has received many additional or supplementary memoranda (which have not been published) but evidence was taken from representatives of only 3 bodies, viz. the Transvaal and Orange Free State Chamber of Mines and the Witwatersrand Native Labour Association (heard jointly) and the Health Officials' Association of Southern Africa.

The Select Committee (Dr. P. J. van Nierop, chairman) consists of 12 M.P.s, amongst whom are two medical M.P.s, viz. Dr. C. de Wet and Dr. J. van A. Steytler.

Health Inspectors and Food Inspectors

Evidence was given on behalf of the Health Officials' Association, which consists chiefly of health inspectors and food inspectors, by Mr. B. W. Russell (President of the Association) and Mr. J. Liston (Chairman of its General Committee) in favour of the compulsory registration of health inspectors and food inspectors by the South African Medical and Dental Council. They contested the views put to the select committee in 1952 by the Medical Officers of Health Group of the Medical Association in opposition to compulsory registration and said that the medical officers of health of the Witwatersrand favoured compulsory registration.

Nurse Radiographers

Dr. F. Retief and Dr. H. H. G. van Blommestein (Chief Medical Officers of the Witwatersrand Native Labour Association and the Anglo-American Corporation, respectively) and Mr. R. E. Worrall (legal adviser) said they were concerned with diagnostic radiographic work carried out by European male nurses in Native hospitals on the Witwatersrand and in the Orange Free State. They contended that it would not be practicable to recruit qualified radiographers to do this work. All the radiographic operations to which the delegation referred were, for all practical purposes, done under the direction of a qualified medical officer, he said. All the assistants underwent a 20 weeks' training course. They operated the machine and processed the plate, and then it was for the medical officer to use the result for diagnostic purposes. They did nothing pertaining to treatment. To bring these persons within the purview of the Bill would probably upset work in the provincial hospitals as well, for they were in many ways in the same position.

If the mining industry was prejudiced in X-ray work—a vital aspect of the medical services that it provided for Native labourers—then serious harm would be done to the Natives and the industry, and in fact to the country at large. At present a Native labourer employed in a dusty occupation was examined every month, although the Silicosis Act stipulated an examination every 90 days.

IN MEMORIAM

THOMAS LEWIS LINDSAY SANDES, *O.B.E.*, M.A., M.D. (DUBL.), F.R.C.S., F.R.C.S.I.

Dr. A. W. S. Sichel, Chairman of Federal Council, writes: A notability in the medical world has passed to the great beyond in the person of Mr. T. Lindsay Sandes, whose death at his home in Claremont, Cape, occurred on Saturday, 25 June 1955.

Photo: Cape Argus

T. L. Lindsay Sandes

His whole life is a record of service to the public and to his profession, but it is mainly for what he achieved, and for the sacrifices he made in the interests of the Medical Association of South Africa that I now pay him tribute.

From his earliest years in Cape Town he was a member of what was then the Cape Western Branch of the British Medical Association and he served on its Council continuously from 1919 until ill-health compelled him to withdraw in 1949. He was a member of numerous committees and played a leading part in debate and in all the activities of the Branch over a long period. It can be said with truth that throughout his active career no meeting of the Medical Association was complete without Lindsay Sandes if he were available, especially in his home area.

He was in his turn President of the Cape Western Branch in 1928 and held a similar position in the now defunct Southern Peninsula Medical Society in 1927. A notable function in that year was a reception held by Sandes at his residence to welcome the late Dr. Alfred Cox during his visit to South Africa. It will be recalled that Dr. Cox played a great part in the negotiations which brought about the formation of the Medical Association of South Africa as a corporate body within the British Medical Association. As a member of the old South African Committee which existed prior to 1927 Lindsay Sandes attended the now historic meeting with Cox in Bloemfontein from which evolved the constitution of the Medical Association as we know it today.

Having played a part in creating the Association he became its first Vice-President and member of the Federal Council, on which body he sat continuously from 1928 until his retirement in 1949. He assumed the Presidency in 1934, in which office he served 2 terms, a period of 6 years in all. Many will remember the glittering Congress of 1938, held at Lourenço Marques, when Sandes filled the role of President as only he could.

For his outstanding and distinguished services he was in 1939 awarded the Gold Medal of the Medical Association, the highest honour it can bestow on one of its members.

Another important position which he held was that of Chairman of the Head Office and Journal Committee, which responsible post he filled from the inception of the Committee until 1949, when ill-health forced him to proffer his resignation; nevertheless he served for a further 2 years as a coopted member.

When the 37th South African Medical Congress was held in Cape Town in 1949 Sandes by common consent became the President of Congress, thus achieving the unique distinction of having been President of the Association and President of Congress in separate years.

Having relinquished much of his exacting work for the Medical Association Sandes did not readily abandon interest in his profession and its problems, but stood for election to the South

African Medical and Dental Council, becoming a member in 1949. Unfortunately the state of his health forced him to resign before he had completed his term of office. After his complete retirement from practice and public duties he nevertheless retained a keen interest in the affairs of the Medical Association and the conditions affecting medical practice and education.

I do not propose to refer to Sandes as the surgeon, clinician, teacher or soldier, hoping that some one in a better position than I will record what we owe to him and remember him for in these capacities. On occasion, however, I had the privilege of cooperating with him in surgical procedures and admiring his surgical skill. I have also been fortunate in seeking his opinion as a patient, when possibly his conservative outlook on the indications for operation spared me from annoying sequelae or worse.

In my long association with Sandes on the Council and Committees of the Medical Association of South Africa I had the opportunity of getting to know him more intimately than is the lot of most. In the earlier years, before I had experienced his Irish temperament, I asked for trouble and I got it. In debate he could be scathing of anyone who dared to differ from him but, on the other hand, he might exude benevolence and encouragement to the novice. In this latter respect I have always looked back to my first appearance on Federal Council in 1935, when Sandes to me was a mentor and guide and remained so in later days when I in my turn had to carry heavy responsibilities.

He was a man of wide tastes in literature, art and sport. In his younger days a genial golfer and devotee of tennis, he still found pleasure in a homely game of croquet almost to the end. For many years, and particularly after his retirement, he found scope for his artistic nature in painting, a hobby which brought him great satisfaction and enjoyment.

The majority of his colleagues will recall Lindsay Sandes as a brilliant and witty after-dinner speaker or as an amusing interjector during a speech being made by someone else. Never at a loss what to say or how to say it, he could switch from pathos to slapstick as one respiration follows another. Whether his speeches were prepared or impromptu they exhibited a wonderful range of facts and a remarkably retentive memory. Possibly his outstanding characteristic as a speaker was his flair for embellishing a story, but this power of embellishment sometimes bewildered those who had heard him tell the same story before.

If I had the literary ability and leisure I might be tempted to produce a book entitled 'The Stories of Sandes'. Among the many that we have all enjoyed one might single out the stories of the Ostrich at the Farmhouse and the Interview with Kitchner at the War Office.

Speaking on behalf of all the members and officials of the Medical Association of South Africa I would like to record our deep sorrow in the loss of a brilliant and loyal friend, and to express to his wife and family our most sincere sympathy. For myself I deeply regret that, owing to my absence on official duties, I was deprived of the opportunity to pay my last respects to one who for so many years had been my friend and counsellor.

Sleep on. Your work is done and nobly done.

Mr. W. Lennox Gordon, O.B.E., *M.D., F.R.C.S. (Edin.), of Cape Town, writes:* I have had the pleasure and privilege of knowing Lindsay Sandes for many years. Our friendship dates back to 1912, when he first settled in Cape Town. He had arrived in South Africa a short time before and made a brief stay in Grahamstown, where his brother, a gifted man, since deceased, was practising as a barrister.

He started in Cape Town as a bacteriologist. This led to work at the leper institution at Robben Island. While working there he carried out pioneer surgical work on leprosy cases, amputating useless and often septic limbs. Many patients were greatly benefited by these, at that time, novel methods.

Sandes joined the South African Medical Corps. about a year before the 1914-18 war. I have never forgotten the last U.D.F. camp to be held at Worcester before the war. Sandes was senior M.O. and as such had to send in a daily medical report to the camp O.C. These reports, couched in the typical strain of wit and humour of which Sandes was master, were by no means appreciated by the 'brass hats'. I wondered then, as on many later occasions in France, how he got away with his witty comments.

With the outbreak of war in 1914 Sandes was appointed to Wynberg Military Hospital as a surgeon. After the South West Africa campaign the 1st South African General Hospital was organized and sent to France. Sandes was promoted major and worked on the surgical staff. When the South African Hospital at Richmond was started Sandes left France and became O.C. Surgical Division at Richmond. As the South African wounded usually landed eventually at Richmond Hospital most of them passed through his hands. While working there he obtained the F.R.C.S. Irel. (1918) and F.R.C.S. Eng. (1920) For his work during the war he received the O.B.E. (Military).

On his return to South Africa Sandes was soon appointed to the surgical staff at the Somerset Hospital, and as lecturer in clinical surgery in the University of Cape Town. With the opening of Groote Schuur Hospital he moved over with the rest of the staff. These appointments he relinquished in 1949, when he was appointed as consulting surgeon. He was also consulting surgeon to the Wynberg Hospital and to the Wynberg Military Hospital.

Sandes was an outstanding surgeon. He would have made his mark and risen to the highest honours in whatever centre he settled in. His technique was excellent, his judgment sound; and he was a bold surgeon, prepared to tackle any case he felt would benefit by his skill. He was, moreover, an excellent lecturer and teacher, standing high in the esteem of the students of the Cape Town Medical School. The valuable work which Sandes did for the profession and our Association is still in our memories. The Association conferred on him the highest honours in its gift. On numerous committees and deputations his facile and convincing presentation of whatever case he had to put forward was of the greatest value. As an after-dinner speaker he probably had no peer in the profession; his method of approach was unique, and we all looked forward to the humour and spice of his witty tongue.

Sandes was a cultured gentleman, much travelled, with a wide general knowledge on many subjects. He was a competent artist, working chiefly in water colours. It is regretted that he never wrote his autobiography. It would have been as entertaining as Munthe's *Story of San Michele*, and probably of equal literary quality.

Altogether he was a remarkable man. I shall miss him greatly as a friend.

Lindsay Sandes married Miss Metcalf of Cradock. He lost one son, who was qualified in medicine, in the last war, and leaves his widow, one son and one daughter, to whom our deepest sympathy is extended.

Dr. A. J. Ballantine, of Claremont, Cape, writes: The passing of Thomas Lindsay Sandes removes from our midst one of the giants of the older generation in our profession. It is doubtful if his place will ever be filled again. He belonged to that class of men whose professional training was supported by a broad education encompassing the humanities as well as the sciences and this often showed itself by his quotations from the classics or from Shakespeare when he was called upon to speak at any function.

Of his medical training, his teaching and his work for the Medical Association over a long period of time, which earned for him the highest honours that the profession could give him, I will not deal. My tribute to his memory deals rather with his work at the Victoria Hospital, Wynberg, where for many years he was surgeon.

He joined the staff of that institution at a time when much of the surgery had perforce to be performed by the general practitioners, for there were then very few surgical specialists in Cape Town. His coming had an immediate effect; not only was it possible to have the scope of the surgical work in the hospital very much enlarged, but his profound knowledge of pathology, his skill in diagnosis, his dexterity in dissection, and his willingness to be a teacher as well as operator, led to an ever-rising standard of work by the general practitioners. Just what it meant for the anxious G.P. to have his advice and help at all times only those who experienced it can know. Perhaps, at that time, we did not realize just how much work he was doing and so we imposed upon him, but in the 20 years and more that I was associated with him he never once suggested that help should be sought elsewhere.

He seemed to have a keener appreciation than most men of the perplexities and anxieties and problems of the general practitioner, and this drew us to him. He made us feel that we were one of a team, and in assisting him at operations and in listening to his teaching we learnt much.

His wide experiences in the work of the Medical Association

enabled him often to furnish us with very sound advice in the discussions that arose at staff meetings. His counsel was invaluable. His great gifts as a public speaker and his acute Irish wit led to his services being often requested. Who of us who heard his appeal for support of the Red Cross that he made in the City Hall can ever forget his brilliance on that occasion? He was so often called upon as an after-dinner speaker that the calls became irksome to him. As he said, they interfered with the little relaxation that he was able to get.

Ill health forced him to give up work, and unfortunately it also deprived him of much of the pleasure that he might have had from his hobbies. Towards the end he found life irksome and perhaps the end was not unwelcome to him.

We shall always be grateful for the honour of his friendship and for all the help he gave us with such telling fellow-feeling for those in distress of mind or body. Our sympathy goes out to all the members of his family.

DEGREES CONFERRED AT THE UNIVERSITIES OF THE WITWATERSRAND AND PRETORIA

The following medical degrees were conferred at the Universities of the Witwatersrand and of Pretoria following the Winter Examinations 1955:

THE WITWATERSRAND

M.B., B.Ch.

Aaron, H. N.
Blaine, M. G.
Brown, R. F.
Burkheiser, A. N.
Didcott, C. C.
Fenster, G.
Gentin, S.
Gordon, V. R.
Gosling, A. R.
Heimann, J. G.
Jaga, V.
Jezile, H. N.
Keshavjee, D. G.
Kushlick, A.
Makanjee, A. D.
Marais, D. F.
Mbolekwa, G. M. F.
Pirie, D.
Ramsay, J. C.
Roberts, W. A. B.
Rubin, D. L.
Tsele, R.
Tshikovhi, T. N. S.
Viljoen, P. J. v. B.

PRETORIA

Graad van Doktor in Geneeskunde

Fichardt, Theunis. (Dept. Radiologie.)

Proefskrif: 'Die Waarde van Retropneumografie en Splenovenografie, eerstens in die onderskeidende Radiologiese diagnose van Splenomegalie en ander linker bobuik tumore, en tweedens in die Radiologiese ondersoek van Poortaar-obstruksie en gevalle van Splenomegalie met Poortaar-Hipertensie.'

Graad van Magister in Geneeskunde

Davis, William Henry. (Dept. Interne Geneeskunde.)
Pretorius, Hendrik Petrus Jacobus. (Dept. Kindergeneeskunde.)

Graad van Baccalaureus in Geneeskunde

De Lange, C. J.
Esterhuizen, J. L.
Groenewald, W. L.
Henning, J. S.
McCall, P. G.
Mulder, W. A.
Rosenzweig, D.
Sietsema-Klooster, W.
Van der Merwe, C. J.
Van Rensburg, J. T. J.
Viljoen, B. J. G.
Vorster, D. J.
Zinn, A. C.

PASSING EVENTS : IN DIE VERBYGAAN

Union Department of Health Bulletin. Report for the 7 days ended 23 June 1955.

Plague, Smallpox, Typhus Fever: Nil.

Epidemic Diseases in other Countries:

Plague: Nil.

Cholera in Calcutta (India); Chalna, Chittagong, Dacca (Pakistan).

Smallpox in Kabul (Afghanistan); Phnom-Penh (Cambodia); Ahmedabad, Allahabad, Bombay, Calcutta, Delhi, Kanpur, Lucknow, Madras, Visakhapatnam (India); Chittagong, Dacca, Lahore (Pakistan); Nhatrang, Saigon-Cholon (Viêt-Nam); Mogadiscio (Somalia); Tanga (Tanganyika).

Typhus Fever in Alexandria, Cairo (Egypt).

Dr. Arthur Victor, formerly of Wolseley and Aliwal North, has returned from abroad where he gained the diplomas D.O.M.S., Dublin, and D.O., London. He is now practising as an ophthalmologist at 202, Board of Executors Buildings, Stockdale Street, Kimberley.

* * *

Dr. Arthur Victor, vroeër van Wolseley en Aliwal Noord, het so pas teruggekeer van oorsee waar hy die diplomas D.O.M.S., Dublin, en D.O., Londen, behaal het. Hy praktiseer nou as oogarts te Board of Executors-gebou 202, Stockdalestraat, Kimberley.

NEW PREPARATIONS AND APPLIANCES : NUWE PREPARATE EN TOESTELLE

Meticortelone (Prednisolone)—Schering. Scherag (Pty.) Ltd., Johannesburg, make the following announcement.

Meticortelone is now available in South Africa. It is an analogue of hydrocortisone and appears to have the same anti-inflammatory and antirheumatic properties as Meticorten,[1] with similarly diminished toxicity. It is 3-5 times as effective mg. for mg. in rheumatoid arthritis as cortisone or hydrocortisone, yet is strikingly free from major undesirable effects.

An average of 20-30 mg (4-6 tablets) a day is gradually reduced until maintenance dosage of 5-20 mg. is reached. The 24-hour dose should be divided into 4 parts given after meals and at bedtime.

At an international symposium on Meticorten and Meticortelone held in New York recently many papers were presented describing experience with these new drugs in the treatment of rheumatoid arthritis, intractable asthma, dermatosis and other diseases responsive to corticosteroid therapy.

1. New Preparations and Appliances (1955): S. Afr. Med. J., **29**, 549.

BOOK REVIEWS : BOEKRESENSIES

MEDICAL HISTORY

Garrison and Morton's Medical Bibliography. An Annotated Check-List of Texts Illustrating the History of Medicine. By Leslie T. Morton. Second Edition. Pp. 655+xiii. £5 5s. London: Grafton & Co. 1954.

Contents: 1. Collected Works; Opera Omnia. 2. Biology. 3. Zoology and Comparative Anatomy. 4. Anatomy and Physiology. 5. State Medicine; Public Health; Hygiene. 6. Epidemiology. 7. Statistics. 8. Medical Jurisprudence. 9. Medical Ethics. 10. Climatic and Geographical Factors in Medicine. 11. Materia Medica; Pharmacy; Pharmacology. 12. Therapeutics. 13. Toxicology. 14. Industrial Hygiene and Medicine. 15. Military and Naval Hygiene and Medicine. 16. Medicine; General Works. 17. Diseases of the Cardiovascular System. 18. Diseases of the Respiratory System. 19. Otology. 20. Diseases of the Digestive System. 21. Diseases of the Digestive System (cont.). 22. Spleen; Lymphatics. 23. Endocrine Disorders. 24. Metabolic Disorders. 25. Dermatology. 26. Diseases of the Genito-Urinary System. 27. Diseases of Bones and Joints. 28. Diseases of the Nervous System. 29. Communicable Diseases. 30. Communicable Diseases (cont.). 31. Surgery. 32. Ophthalmology. 33. Gynaecology. 34. Obstetrics. 35. Paediatrics. 36. Conditions and Syndromes not Classified Elsewhere. 37. History of Medicine. 38. Medical Biography. 39. Medical Bibliography. 40. Medical Lexicography. Indices.

This formidable reference book, now in its second edition within a decade, is an indispensable source of information to the medical historian. Leslie T. Morton, of the *British Medical Journal*, explains in the Introduction that Sir William Osler first suggested a work of this sort; that Fielding H. Garrison first carried his suggestion into effect by compiling a list in 1912; and that this revised list—published in the *Bulletin of the Institue of the History of Medicine* (1933, vol. 1, 333), under the title, '*A Revised Students' Check-List of Texts Illustrating the History of Medicine*'—forms the basis of the present work. Those familiar with Garrison's *Introduction to the History of Medicine* will appreciate its indispensable nature.

The present edition contains some 6,800 items, classified under subjects as indicated in the contents list. Crossreferences and indices are complete, and the researcher can find his way about the work quite easily. It is hardly a book to read—unless one has acquired the habit of reading dictionaries—but on almost every page there is something to catch the eye and hold the interest of the average reader. Make no mistake, though, this is first and foremost a reference book, and the author wisely makes no attempt to widen its appeal by irrelevant digression.

South African readers will note that there are no items dealing with African personalities, other than those belonging to the ancient civilization of the Nile Valley. The only South African I could find amongst the 6,808 items is Albert Hoffa (1859—1908), 'a leading German orthopaedist (who) made important contributions to the subject and founded the *Zeitschrift fur Orthopedische Chrurgie*.' Hoffa was the son of one of the early German-Jewish doctors who settled on the Karroo at the middle of the last century, and was born at Richmond, Cape. Qualifying at Freiburg University in 1883, he rose steadily in the German orthopaedic world, and in 1902 he succeeded to the directorship of the Berlin Orthopaedic Clinic, with the title of *Geheimer Medizinalrat*—the highest rank then attainable in Imperial Germany by a doctor.

E.H.B

CORRESPONDENCE : BRIEWERUBRIEK

STUDENTS' MEDICAL COUNCIL REUNION

To the Editor: This year, 1955, will see the Silver Jubilee of the University of the Witwatersrand's Students' Medical Council. In 1930 the Students' Representative Council, after some considerable discussion formally recognized the newly-constituted S.M.C. which had arisen out of the original Students' Medical Society.

In order to commemmorate this historic event, the present S.M.C. intends holding a reunion of past members of this Council, at the University on Friday, 26 August 1955. Unfortunately, our list is very incomplete and we have found it difficult to trace all those concerned.

Any past member who wishes to attend this reunion should contact the S.M.C. Office, Medical School, Hospital Hill, Johannesburg (telephone 44-1492, ext. 18) before Monday, 8 August.

M. Sorokin
Secretary

Students' Medical Council
University of the Witwatersrand
Medical School
Hospital Hill
Johannesburg
27 June 1955

TEST TUBE BABIES

To the Editor: When the possibilities of conception by artificial insemination were first mooted over 20 years ago, few could have anticipated the medico-legal issues that were to arise. These issues were thrown into relief with the enactment in England in 1937 of the Matrimonial Causes Act. The Act lays down that wilful refusal on the part of a spouse to consummate marriage shall be grounds for nullity. This may seem elementary enough but, nevertheless, it raises questions to which the attention of the medical profession should be directed.

What, for instance, of the man who is incapable of consummating a marriage, but acquires parenthood by artificial insemination? Lord Reading referred to an instance in the House of Lords in November 1948: A woman who was married in 1940 to a man whom she subsequently found to be incapable of consummating the marriage, towards the end of 1947 had herself artificially impregnated with the husband's consent and through his agency. She left her husband in January 1948, and in September of that year a child was born. Two months later a decree of nullity was granted on the grounds of the husband's incapacity. Notwithstanding the fact that the child was the issue of the father and mother, the decision of the judge to grant a decree was determined by the fact that 'there had been no penetration'.

Another question that arises is this: Does artificial insemination by a donor (A.I.D.) constitute adultery? My own view is that an irrational situation would be established if, on the one hand, a marriage could be annulled on the ground of nullity despite conception by artificial insemination *per* an impotent husband, yet on the other, artificial insemination by fecundation by an extramarital donor could be held to constitute adultery.

A third question which invites attention: In artificial insemination by an extra-marital donor, whose name should be entered as the father in the birth certificate of the child? In my view the identity of the extra-marital donor should in no circumstances be disclosed to any person other than the doctor in attendance; yet the position is anomalous if the mother's husband registers himself as the natural parent in the declaration of birth. It might be argued in a court of law that he is contravening the Perjury Act, for which a sentence of imprisonment may be imposed. Falsity in the declaration of paternity also raises some tricky legal points in regard to titles, estates, etc.

The legislators who framed the Matrimonial Causes Act (1937) could not have anticipated the diverse legal contingencies which inhere in the practice of artificial insemination; and it seems that the law should be amended so as to grant relief from perjury both to the normal father and to the doctor in attendance. Meanwhile, in view of the ethico-legal issues involved, medical practitioners in this country should not be a party to the practice of A.I.D. until a directive on the subject has been issued by the South African Medical Council.

Louis F. Freed

2 Barbican Buildings
President Street
Johannesburg
28 June 1955